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[IN SENATE.] [SESSION OF 1856.

ANNUAL REPORT

OF THE

CONTROLLER OF STATE.

JAMES ALLEN, STATE PRINTER.

J. Statement of the amount of Seven per cent. Civil Bonds, and State Prison Bonds, outstanding June 30, 1855.

K. Statement of the amount of Controller's Civil Warrants, outstanding June 30, 1855, and condensed Statement of the Civil Debt of the State, June 30, 1855.

L. Statement of the War Debt of the State, June 30, 1855.

M. Estimate of Receipts for the Seventh Fiscal Year, ending June 30, 1856.

N. Estimate of Expenditures for the Seventh Fiscal Year, ending June 30, 1856.

O. Warrants drawn from July 1, 1855, to December 20, 1855.

P. Civil and War Debt of the State, December 20, 1855.

Q. Receipts into the State Treasury from July 1, 1855, to December 20, 1855.

I have the honor to be, very respectfully,

Your obedient servant,

SAM. BELL,

Controller of State.

RECEIVED FROM	Poll Tax of 1853.	Poll Tax of 1854.	Property Tax of 1852.	Property Tax of 1853.	Property Tax of 1854.	Foreign Miners' License.	Merchants' License.	Bankers' License.	Gaming License.	Peddlers' License.	Liquor License.	Ass'n License.
Alameda County	$170 11	$751 65		$1,684 15	$12,106 80				$50 93	$455 90		..
Amador "		1,492 64			3,580 30	$3,237 73	$145 50	$227 95		465 60		..
Butte "	258 55	1,741 53		3,130 75	4,795 17	4,680 26			25 47	29 10		..
Calaveras "	250 94	116 40			7,600 70	14,547 51		1,026 84		485 00		..
Colusi "	602 44	458 50		1,282 30	3,275 08	..	..	..	..	..	..	..
Contra Costa "		600 33			8,324 62		..	..		368 60		..
El Dorado "		11,716 10			6,496 83	22,460 97			1,125 82	1,920 60	$1,099 30	$87 30
Humboldt "	10 66	644 89		261 10	1,662 69		58 20		33 95	..	..	..
Los Angeles "		569 83		17 29	12,807 29			29 10		387 95		94 90
Marin "	313 31	82 77		5,840 53	..	..	..	..	..	..	..	..
Mariposa "	15 46	1,976 78	$471 22			4,339 35		101 86	2,505 67	232 80		74 59
Monterey "		204 34		66 74	6,364 34		..		280 09	155 20		87 30
Napa "	120 77	40 16		1,008 18	5,659 47		..	..	..	126 10		
Nevada "	470 26	3,636 22		1,114 37	4,219 95	14,369 56		493 73		436 50		..
Placer "		6,907 76			5,011 61	12,471 02	29 55			818 40		145 50
Plumas "		1,008 89			598 02	1,101 84		116 40		87 30		..
Sacramento "		2,779 10		3,018 57	32,955 37	7,868 66	2,034 58	12,064 09		2,240 70		1,455 00
San Bernardino "		204 40		62 63	808 14		..	..		29 10		..
San Diego "	47 75	207 78		250 97	2,679 64		..	..	..	..	..	..
San Francisco "	48 40	3,686 29			150,897 17		7,015 51	5,553 25		2,182 50		11,422 34
San Joaquin "		1,355 99			20,669 95	170 84	1,542 30	523 80	50 93	465 60		
San Luis Obispo "		20 91			1,484 49		..	..	..	..	..	..
Santa Barbara "				75 20		..	..	..		88 27		..
Santa Clara "		1,586 99		610 75	25,396 61		409 00		152 78	1,570 40		
Santa Cruz "	69 84	196 29		688 62	3,029 39		..		25 46		..	..
Shasta "		902 64		216 56	3,759 46	3,612 08	232 80	389 45		64 66		..
Sierra "		1,574 53			6,217 72	5,734 59	29 10			203 70		31 40
Siskiyou "	214 65	2,742 97		416 88	5,147 62	836 83	58 20	437 79	1,145 80	9 70		
Solano "	102 36	624 95		405 66	3,146 94			..	..	..	..	
Sonoma "		1,580 30		819 81	9,770 75		..	..		261 90		
Stanislaus "		538 32			1,795 71	330 66	..	..	..	..	..	..
Sutter "		348 27		163 29	2,965 00			..		87 30		..
Trinity "	359 60	794 36		162 32	1,709 17	7,177 71	..	..	..	..	..	..
Tulare "		229 46			417 39			..	..	..	..	..
Tuolumne "		4,780 96		952 83	6,035 51	10,792 39	..	497 74	534 12	916 65		..
Yolo "	233 55	1,105 80			3,207 52					29 10		..
Yuba "		1,062 07			21,033 05	9,085 25	1,883 74	1,362 85		1,096 10		748 46
United States.....												
Hackett & Judah.....												
City of San Francisco..												
Board Cal. Land Com'rs.												
Commis'r of Immigrants												
Secretary of State.....												
Totals.....	$3,288 65	$58,271 17	$471 22	$22,249 50	$385,129 47	$123,323 25	$13,438 48	$22,824 85	$5,931 02	$15,215 72	$1,099 30	$14,146 79

STATEMENT

into the State Treasury, during the Sixth Fiscal Year—ending June 30, 1855.

Auction Duties.	Tavern Keepers' Licenses.	Restaurant Licenses.	Circus License.	Brokers' Licenses.	Theater Licenses.	Billiard and Bowling Alley Licenses.	Consigned Goods.	Possessory Claims.	Custom House Block.	Fines for violation of Revenue Laws.	Insurance Companies.	Commutation Tax.	Fees and Commissions from Secret'y of State.	Wharf Privileges.	Water Lots, City of S. Francisco.	Fines for obstruction of Harbors.	Sixth Property Sold by Board California Land Commissioners.	COUNTIES.	TOTALS.
	$635 35	$213 40	..	..		$1,251 30		$14 55		..								Alameda County	$17,334 14
..	..	..	..	..		334 65		21 83		$48 50								Amador "	9,554 70
..	19 40	..	..	..		358 92		36 37		304 58								Butte "	15,380 10
..	..	..	..	..		871 15		..	..	..								Calaveras "	24,298 54
	9 70		..	..		145 50		..		29 10								Colusi "	5,802 62
$104 06		..	..	..		203 70		..	..	..								Contra Costa "	9,601 31
39 91	27 48		..	..		1,120 45		7 28		78 57								El Dorado "	46,180 61
..			..	..		749 60		29 10		..						$48 50		Humboldt "	3,498 69
	..	..	..	..		145 50		..	..	..								Los Angeles "	14,051 86
	..	..	..	..		..		..		..								Marin "	6,357 06
	98 62		..	..	..	..	..	21 83		..								Mariposa "	12,607 85
		964 22		..		1,425 90		..	..	..								Monterey "	7,861 47
85 08	203 70		..	..		407 40		7 28		..								Napa "	7,012 40
1 94		19 40		..		29 10		7 28		..								Nevada "	25,229 47
..	..	..	..	..		488 88		..	..	..								Placer "	27,211 29
	387 12	60 00		..		1,079 85		22 50		270 98								Plumas "	3,057 05
..	..	..	..	..		145 50		29 10		..								Sacramento "	68,024 50
359 41		194 00		..	$489 85	2,286 29		21 83		257 05								San Bernardino "	1,104 27
..	..	..	..	..	..	..	..	..	..	..								San Diego "	3,186 14
..	..	..	..	..	..	..	..	..	..	..								San Francisco "	249,589 56
29,649 23	..		$97 00	$590 25		4,157 42	$33,417 20			..		$873 00						San Joaquin "	26,300 61
315 98		135 80		..		1,047 60		21 82		..								San Luis Obispo "	1,555 12
..	..		..	..		49 72		..	..	..								Santa Barbara "	357 47
..	..		..	..		194 00		..	..	..								Santa Clara "	30,936 88
30 80			..	..		1,164 00		14 55		..								Santa Cruz "	4,009 60
..			..	..	..	..	..	..	..	..								Shasta "	10,386 58
	698 94		..	..		459 74		50 25		..								Sierra "	15,074 44
	..	..	..	281 30		902 10		..	..	..								Siskiyou "	13,157 90
500 89	756 60		..	..		814 80		36 37		38 80								Solano "	4,530 55
8 14		..	..	..		242 50		..	..	..								Sonoma "	12,725 14
42 60		38 80		..		174 60		7 28		29 10								Stanislaus "	2,679 24
..	..	..	..	..	..	..		14 55		..								Sutter "	3,585 69
..	..	..	..	..	..	..		21 83		..								Trinity "	10,326 84
..	..	..	..	..		116 40		7 28		..								Tulare "	646 85
..	..	..	..	..	..	..	..	..	..	..								Tuolumne "	25,519 71
..	..	..	..	..		987 68		21 83		..								Yolo "	4,690 85
..	..	..	..	..	..	..		114 88		..								Yuba "	37,682 94
615 38		..	..	..	..	796 04	..	..	..	..								United States	150,000 00
....									$150,000 00					$1 00				Hackett & Judah	1 00
....															$312 50			City of San Francisco	312 50
....																	$212,833 56	Board Cal. Land Com'rs.	212,833 56
....																		Commis'r of Immigrants	29,292 50
....												$29,292 50	$1,957 50					Secretary of State	1,957 50
$31,753 42	$2,836 91	$1,625 62	$97 00	$871 55	$489 85	$22,150 29	$33,417 20	$529 59	$150,000 00	$1,057 68	$873 00	$29,292 50	$1,957 50	$1 00	$312 50	$48 50	$212,833 56	Grand Total	$1,155,537 10

[B.] EXPENDITURES

For the Sixth Fiscal Year, ending June 30th, 1855.

EXECUTIVE DEPARTMENT.

Salaries.

Salary of	Governor	$10,000 01	
"	Controller of State	4,500 00	
"	Treasurer of State	4,500 00	
"	Secretary of State	3,500 00	
"	Attorney-General	2,000 01	
"	Surveyor-General	2,000 02	
"	Quartermaster-General	1,833 35	
"	Sup. of Public Instruction	4,125 00	
"	California Land Commissioners	17,416 71	
"	State Prison Inspectors	7,293 33	
	Total		$57,168 43

Secretaries and Clerks.

Salary of	Governor's Private Secretary	$2,291 66	
"	Clerks in Controller's Office	9,450 00	
"	Clerks in Treasurer's Office	6,480 00	
"	Clerks in Sec. of State's Office	9,578 56	
	Total		27,800 22

Contingent Expenses.

Governor's Contingent Fund		$2,463 17	
Governor's Special Fund		8,659 92	
Contingents of	Controller's Office	3,183 94	
"	Treasurer's Office	4,160 05	
"	Secretary of State's Office	3,646 40	
"	Quartermaster-General's Office	1,193 86	
"	Attorney-General's Office	3,571 00	
"	Sup. Pub. Instruction's Office	2,455 06	
"	Surveyor-General's Office	1,278 98	
"	Board of Cal. Land Commis'rs	22,000 00	
	Total		52,612 38
	Amount carried forward		$137,581 03

Amount brought forward		$137,581 03

JUDICIAL DEPARTMENT.

Salaries.

Salaries of Justices of Supreme Court.....	$26,799 92	
" District Judges.....	52,093 88	
Total		78,893 80

Contingents.

Contingents of the Supreme Court.....	$23,384 49	
		23,384 49

LEGISLATIVE DEPARTMENT.

Pay and Mileage of Lieutenant-Governor and Senators	$56,638 20	
Pay and Mileage of Assemblymen.....	132,935 20	
Total.....		189,573 40

Officers and Clerks.

Of the Senate.....	$56,945 00	
Of the Assembly.....	68,731 00	
Total		125,676 00

Contingents.

Of the Legislature.....	$59,200 58	
Total.....		59,200 58

EXPENDED FOR HOSPITAL PURPOSES.

State Marine Hospital.....	$207,529 92	
Insane Asylum.....	66,439 88	
Insane Asylum, (Additional Buildings).....	80,000 00	
Indigent Sick of San Francisco County.....	5,525 54	
Amount carried forward.....		$614,309 30

Amount brought forward		$614,309 31
Indigent Sick of San Joaquin County	$431 53	
" " Sacramento County	1,419 16	
" " Santa Clara County	869 49	
" " San Diego County	251 63	
" " Sierra County	695 08	
" " Sonoma County	359 20	
" " Solano County	369 89	
" " Siskiyou County	292 28	
" " San Luis Obispo County	164 45	
" " Santa Cruz County	240 88	
" " Butte County	1,118 44	
" " Colusi County	80 90	
" " Calaveras County	3,374 25	
" " El Dorado County	4,622 40	
" " Los Angeles County	1,021 75	
" " Monterey County	355 94	
" " Mariposa County	1,498 82	
" " Nevada County	3,570 26	
" " Napa County	276 09	
" " Placer County	2,130 27	
" " Tuolumne County	3,488 01	
" " Tulare County	1,432 98	
" " Yuba County	2,481 23	
" " Yolo County	170 55	
Total		390,210 82

EXPENDED FOR PRINTING.

State Printing	$131,886 71	
Paper for Printing	7,518 50	
Total		139,405 21

MISCELLANEOUS EXPENSES.

Paid for Translating Laws	$7,316 50	
" Copying Laws and Journals	459 65	
" Distributing Laws and Journals	935 00	
" Indexing Laws and Journals	400 00	
" Office Rent of California Land Commissioners	700 00	
" Rent of Armory, etc	880 50	
" Rent of State Offices	2,092 50	
Amount carried forward		$1,143,925 33

Amount brought forward		$1,143,925 33
Paid for Transportation of Prisoners	$39,408 00	
" Transportation of Insane.....	995 00	
" State Library.....	348 75	
" Postage.....	2,262 26	
" Official Advertisements	6,155 72	
" Northern Boundary Survey.....	2,024 32	
" Fitting up Treasurer's Office.....	70 90	
" State Arms.....	207 50	
" Fees of Counsel employed by State....	1,000 00	
" Costs of Suit, wherein the State was Party	1,332 52	
" Controller's Warrant Plate and Printing	750 00	
" Counsel to assist Attorney-General....	2,000 00	
" Prosecution of Escheated Estates.....	14,143 00	
Paid State Agricultural Society.....	6,500 00	
" A. J. F. Phelan, making Statement of War Debt	3,000 00	
" S. R. Weed, amount of Relief Bill.....	50 00	
" Wm. Coates, " "	50 00	
" Frank Denver, " "	1,000 00	
" Knox & Farquharson, "	4,671 17	
" A. T. Melvin, " "	18,420 00	
" Louis Bartlett, " "	144 00	
" B. B. Redding, " "	9,979 91	
" P. K. Woodside, " "	701 00	
" Geo. Kerr & Co., " "	7,733 14	
" H. B. & C. E. Paine, "	197 00	
" J. B. Wing, " "	54 00	
" W. H. Williamson, " "	36 00	
" Addison Martin, " "	1,100 00	
" Jesse Sawyer, " "	845 60	
" John T. Hayes, " "	360 00	
" James Austen, " "	2,935 80	
" San Francisco Protestant Orphan Asylum, amount of Relief Bill.....	5,000 00	
" Roman Catholic Orphan Asylum, amount of Relief Bill	5,000 00	
" Annie V. R. Wells, Relief Appropriation.	1,333 33	
" Wells, Fargo & Co., " " ..	3,317 39	
" S. H. Marlette, " " ..	1,374 95	
" J. B. Trask, for Geological Survey.....	5,000 00	
" San Francisco Manufacturing Company, for Extra Work in constructing State Prison Buildings	10,535 90	
" Wm. S. Jewett, for Portrait of John A. Sutter.....	2,500 00	
" Wm. S. Olds, for Law Library.....	17,250 00	
" Geo. W. Gift, preparing Bonds of 1855..	1,000 00	
Total		193,571 31
Grand Total		$1,337,496 64

RECAPITULATION OF EXPENDITURES.

Executive Department	$137,581 03	
Judicial "	102,278 29	
Legislative "	374,449 98	
Hospital Purposes	390,210 82	
Printing	139,405 21	
Miscellaneous Expenses	193,571 31	
Grand Total		$1,337,496 64

[C.]

EXHIBIT

Of Receipts into the State Treasury during the First, Second, Third, Fourth, Fifth and Sixth Fiscal Years.

RECEIVED FROM	1st Fis'l Year ending June 30th, 1850.	2d Fiscal Year ending June 30th, 1851.	3d Fiscal Year ending June 30th, 1852.	4th Fiscal Year ending June 30th, 1853.	5th Fiscal Year ending June 30th, 1854.	6th Fiscal Year ending June 30th, 1855.	TOTALS.
Alameda County.....	..	..	..	..	$15,816 97	$17,334 14	$33,151 11
Amador "	..	..	..	..	..	9,554 70	9,554 70
Butte "	..	$512 43	$3,064 75	$6,651 42	7,347 48	15,380 10	32,956 18
Calaveras "	..	..	3,173 93	10,670 96	35,765 71	24,298 54	73,909 14
Contra Costa "	..	9,854 57	9,690 04	9,819 68	8,481 49	9,601 31	47,447 09
Colusi "	..	..	1,754 09	1,164 76	3,662 95	5,802 62	12,384 42
El Dorado "	..	1,200 00	8,643 93	27,035 52	65,666 02	46,180 61	148,726 08
Humboldt "	..	..	..	..	3,645 63	3,498 69	7,144 32
Klamath "	..	..	..	549 62	1,100 00	..	1,649 62
Los Angeles "	..	10,037 02	10,593 32	9,354 53	17,051 07	14,051 86	61,087 80
Mariposa "	..	858 53	..	6,091 28	14,359 23	12,607 85	33,916 89
Marin "	..	4,553 50	4,402 03	3,298 38	..	6,357 06	18,610 97
Monterey "	..	16,818 79	9,135 61	5,821 55	9,607 00	7,861 47	49,244 42
Nevada "	..	..	8,310 41	15,822 98	14,630 98	25,229 47	63,993 84
Napa "	..	4,149 92	4,790 70	3,326 47	6,697 60	7,012 40	25,977 09
Placer "	..	..	8,041 61	26,798 95	28,302 73	27,211 29	90,354 58
Plumas "	..	..	..	..	..	3,087 05	3,087 05
San Bernardino "	..	..	..	..	1,528 46	1,104 27	2,632 73
San Francisco "	..	132,359 29	100,544 54	127,681 79	204,874 39	249,589 56	815,049 57
San Diego "	..	..	3,910 50	598 91	1,827 60	3,186 14	9,523 15
San Luis Obispo "	..	2,667 74	2,245 65	1,353 13	1,693 30	1,555 12	9,514 94
San Joaquin "	..	9,198 30	13,389 97	16,120 25	22,332 46	26,300 61	87,341 59
Santa Clara "	..	22,790 07	16,873 26	2,083 89	15,137 07	30,936 88	87,821 17

Santa Barbara County.....	..	5,086 87	3,621 26	3,430 34	5,853 64	357 47	18,349 58
Santa Cruz "	..	4,948 36	7,903 23	146 30	7,288 40	4,009 60	24,295 89
Sacramento "	..	42,092 29	64,939 70	17,977 36	34,704 95	68,024 50	227,738 80
Sutter "	..	4,772 38	1,000 00	2,795 12	3,886 94	3,585 69	16,040 13
Solano "	..	9,580 99	6,897 35	7,522 19	11,583 90	4,530 55	40,114 98
Sonoma "	..	4,772 43	4,800 00	9,356 19	13,479 90	12,725 14	45,133 66
Siskiyou "	..	..	..	5,001 45	3,327 83	13,157 90	21,487 18
Sierra "	..	..	..	..	14,544 83	15,074 44	29,619 27
Shasta "	..	..	5,185 56	2,608 15	8,318 46	10,386 58	26,498 75
Stanislaus "	..	..	..	..	..	2,679 24	2,679 24
Tulare "	..	..	..	..	1,012 62	646 85	1,659 47
Tuolumne "	..	..	8,260 51	20,470 52	5,309 51	25,519 71	59,560 25
Trinity "	..	..	1,034 03	1,203 58	6,635 82	10,326 84	19,200 27
Yuba "	..	9,827 25	12,184 46	18,112 67	23,804 58	37,682 94	101,611 90
Yolo "	..	1,308 20	2,701 60	4,576 01	4,070 00	4,690 85	17,346 66
Foreign Miners' Tax Act of 1850	3,156 27	29,991 20	..	..	..	..	33,147 47
Governor's Office Rent, refunded	..	1,235 00	..	..	..	..	1,235 00
State Marine Hospital.....	..	887 60	..	..	..	..	887 60
Secretary of State's Office.....	..	187 25	80 75	1,156 20	2,604 20	1,957 50	5,985 90
State Assayer's Office	..	1,106 07	..	..	..	..	1,106 07
City of San Francisco.....	..	..	15,250 00	..	53,635 50	312 50	69,198 00
A. W. Adams	..	..	11 03	..	..	..	11 03
Controller of State.....	..	..	..	500 00	268 00	..	768 00
Pacific Mail Steamship Company.	..	..	..	..	12,500 00	..	12,500 00
Board of Cal. Land Commissioners	..	..	..	..	294,902 70	212,833 56	507,736 26
Commissioner of Immigrants.....	..	..	24,391 25	85,885 70	31,058 00	29,292 50	170,627 45
Estate of W. W. Scott, deceased.	..	..	..	..	4,240 31	..	4,240 31
Estate of George Brock, deceased	..	..	..	..	89 09	..	89 09
United States.....	..	..	..	..	..	150,000 00	150,000 00
Hackett & Judah.....	..	..	..	..	..	1 00	1 00
Totals	$3,156 27	$330,796 05	$366,825 07	$454,985 85	$1,022,647 32	$1,155,537 10	$3,333,947 66

[D.]

EXHIBIT

Of Expenditures for the First, Second, Third, Fourth, Fifth and Sixth Fiscal Years.

EXPENSES OF	First Fiscal Year, ending June 30, 1850.	Second Fiscal Year, ending June 30, 1851.	Third Fiscal Year, ending June 30, 1852.	Fourth Fiscal Year, ending June 30, 1853.	Fifth Fiscal Year, ending June 30, 1854.	Sixth Fiscal Year, ending June 30, 1855.	TOTALS.
Executive Department	$26,568 30	$103,354 84	$94,886 20	$102,607 04	$125,110 49	$137,581 03	$590,107 90
Judicial "	26,996 50	98,054 25	155,532 76	126,697 09	93,309 60	102,278 29	602,868 49
Legislative "	215,806 94	212,924 48	306,780 25	312,301 61	307,712 78	374,449 98	1,729,976 04
Printing "	74,073 25	100,933 51	159,845 77	202,494 39	107,610 71	139,405 21	784,362 84
Hospital Purposes		8,387 30	90,939 75	210,306 42	225,453 91	390,210 82	925,298 20
Miscellaneous	4,720 27	62,048 45	117,709 83	314,742 58	345,560 47	193,571 31	1,038,352 91
Totals	$348,165 26	$585,702 83	$925,694 56	$1,269,149 13	$1,204,757 96	$1,337,496 64	$5,670,966 38

[E.] TABULAR STATEMENT

Of the Amount of each Appropriation made by law, the Amount audited under each, and the balance unexpended at the close of the Sixth Fiscal Year, ending June 30th, 1855.

PURPOSE AND DATE OF ACT.	Amount of Appropriation.	Amount Expended.	Amount Unexpended.	Amount Overdrawn.
For the erection of an additional Building for the Insane Asylum, Act of May 15th, 1854	$80,000 00	$80,000 00		
For Support and Maintenance of the Insane Asylum, General Appropriation Act of March 21st, 1854, unexpended balance	33,939 39	33,939 39		
For the Support of the Indigent Sick, Act of May 19th, 1853	36,241 02	36,241 02		
For Support and Maintenance of the State Marine Hospital, Act of May 19th, 1853, unexpended balance	39,764 23	39,764 23		
General Appropriation Act of March 21st, 1854, unexpired balances.				
For Support of the State Marine Hospital	73,257 70	73,257 70		
" Salary of Governor	6,666 68	6,666 68		
" " Controller of State	3,000 00	3,000 00		
" " Treasurer "	3,000 00	3,000 00		
" " Secretary "	2,625 00	2,625 00		
" " Superintendent of Public Instruction	3,000 00	3,000 00		
" " Surveyor-General	1,366 68	1,333 36	$33 32	
" " Attorney-General	1,333 34	1,333 34		
" " Quartermaster-General	1,333 36	1,333 36		
" " Governor's Private Secretary	1,676 77	1,458 33	218 44	
" " Justices of Supreme Court	18,000 04	18,000 04		

TABULAR STATEMENT.—Continued.

PURPOSE AND DATE OF ACT.	Amount of Appropriation.	Amount Expended.	Amount Unexpended.	Amount Overdrawn.
For Salary of Land Commissioners	$11,083 36	$11,083 35	01	
" " District Judge	44,653 67	43,361 88	$1,291 79	
" " Clerks in Controller's Office	6,210 00	6,210 00		
" " " Treasurer's "	4,320 00	4,320 00		
" " " Secretary of State's Office	4,140 00	3,992 56	147 44	
" Extra Clerk hire in " "	2,716 00	2,716 00		
" Special Contingent Fund of Governor	1,918 25	1,918 25		
" Contingents of Governor's Office	981 81	963 17	18 64	
" " Controller's "	902 27	902 27		
" " Treasurer's "	286 03	286 03		
" " Secretary of State's Office	1,072 87	1,072 87		
" " Surveyor-General's "	597 75	597 75		
" " Quartermaster-General's Office	607 35	607 35		
" " Superintendent of Public Instruction	208 71	208 71		
" " Supreme Court	865 00	865 00		
" Office Rent of Land Commissioners	1,800 00	700 00	1,100 00	
" Public Printing	900 00	900 00		
" Paper for the same	3,196 75	3,196 75		
" Translating Laws	3,735 50	3,735 50		
" Transportation of Prisoners	13,993 00	13,993 00		
" Northern Boundary Survey	2,024 32	2,024 32		
" Distributing Laws and Journals	935 00	935 00		
" Repairing and Cleaning State Arms	207 50	207 50		
" Articles furnished Legislature	136 00	136 00		
" Per Diem and Mileage of Lieut. Governor	256 00	256 00		
" Per Diem and Mileage of Assemblymen	6,395 00	6,395 00		
" Assembly Contingent Fund	8 37	8 37		

For Pay of Officers and Clerks of Senate	2,983 00	2,983 00	
" Relief of the Insane Asylum, Act of March 1st, 1855	8,500 00	8,500 00	
General Appropriation Act of April 27th, 1855.			
For Maintenance of Insane Asylum	50,000 00	20,000 49	29,999 51
" Salaries of Physicians of same	8,000 00	4,000 00	4,000 00
" " Governor	10,000 00	3,333 33	6,666 67
" " Controller of State	4,500 00	1,500 00	3,000 00
" " Treasurer "	4,500 00	1,500 00	3,000 00
" " Secretary "	3,500 00	875 00	2,625 00
" " Superintendent of Public Instruction	4,500 00	1,125 00	3,375 00
" " Surveyor-General	2,000 00	666 66	1,333 34
" " Attorney-General	2,000 00	666 67	1,333 33
" " Quartermaster-General	3,000 00	499 99	2,500 01
" " Governor's Private Secretary	2,500 00	833 33	1,666 67
" " Justices of Supreme Court	28,000 00	8,799 88	19,200 12
" " Land Commissioners	6,500 00	6,333 36	166 64
" " District Judges	64,000 00	8,732 00	55,268 00
" " Clerks in Controller's Office	9,720 00	3,240 00	6,480 00
" " " Treasurer's "	6,480 00	2,160 00	4,320 00
" " " Secretary of State's Office	9,720 00	2,870 00	6,850 00
" Governor's Special Contingent Fund	5,000 00	5,000 00	
" Contingents of Governor's Office	1,500 00	1,500 00	
" " Controller's Office	4,000 00	292 50	3,707 50
" " Treasurer's Office	3,000 00	1,024 02	1,975 98
" " Secretary of State's Office	3,000 00	673 53	2,326 47
" " Attorney-General's Office	1,200 00	1,171 00	29 00
" " Surveyor-General's Office	2,000 00	631 23	1,368 77
" " Quartermaster-General's Office	1,000 00	436 51	563 49
" " Superintendent of Public Instruction's Office	1,000 00	194 00	806 00
" " Supreme Court	12,000 00	10,644 49	1,355 51
" State Printing	55,000 00	30,986 71	24,013 29

TABULAR STATEMENT.—Continued.

PURPOSE AND DATE OF ACT.	Amount of Appropriation.	Amount Expended.	Amount Unexpended.	Amount Overdrawn.
For Paper for Printing	$5,000 00	$1,889 00	$3,111 00	
" Translating Laws	4,000 00	3,581 00	419 00	
" Transportation of Prisoners	25,000 00	19,080 00	5,920 00	
" Rent of Armory	1,000 00	880 50	119 50	
" Contingent Expenses of Legislature	15,000 00	10,056 21	4,943 79	
" Per Diem and Mileage of Senators	18,500 00	6,791 00	11,709 00	
" " " Lieutenant-Governor	1,600 00		1,600 00	
" " " Assemblymen	47,000 00	11,800 00	35,200 00	
" Contingents of Assembly	15,000 00	15,000 00		
" " Senate	8,500 00	8,500 00		
" Compensation of Officers and Clerks of Assembly	17,000 00	10,081 00	6,919 00	
" " " " Senate	14,000 00	3,965 00	10,035 00	
" Copying Laws and Journals	1,200 00	459 65	740 35	
" Purchase of Safe, etc., for Treasurer's Office	2,500 00	70 90	2,429 10	
" Rent of State Offices	10,000 00	2,092 50	7,907 50	
" Indexing Laws and Journals	3,000 00	400 00	2,600 00	
" State Geological Society	5,000 00	5,000 00		
Appropriations for Deficiencies, Act of March 14th, 1855.				
For Contingents of Controller's Office	3,000 00	1,989 17	1,010 83	
" " Treasurer's Office	2,850 00	2,850 00		
" " Secretary of State's Office	1,900 00	1,900 00		
" " Attorney-General's Office	2,400 00	2,400 00		
" " Surveyor-General's Office	50 00	50 00		
" " Quartermaster-General's Office	150 00	150 00		
" " Superintendent of Public Instruction's Office	2,850 00	2,052 35	797 65	
" " Land Commissioners	22,000 00	22,000 00		

For Contingents of Supreme Court	11,875 00	11,875 00		
" Paper for State Printing	2,500 00	2,432 75	67 25	
" Transportation of Prisoners	15,000 00	6,335 00	8,665 00	
" Contingents of the Legislature	8,000 00	8,000 00		
" Transportation of Insane	1,200 00	995 00	205 00	
" Official Advertisements	7,000 00	6,155 72	844 28	
" Fees of Counsel employed by the State	1,000 00	1,000 00		
" Costs of Suits wherein the State is a Party	2,000 00	1,332 52	667 48	
" Plate for Controller's Warrants	750 00	750 00		
" Counsel to assist the Attorney-General	2,000 00	2,000 00		
Appropriations for Deficiences, Act of January 27th, 1855.				
For per diem and Mileage of Lieutenant-Governor and Senators	16,518 00	16,591 20		73 20
" " " Assemblymen	35,000 00	34,740 20	259 80	
" Contingent Fund of Assembly	2,500 00	2,500 00		
" " " Senate	2,000 00	2,000 00		
" Pay of Officers and Clerks of Senate	20,000 00	20,000 00		
" " " " Assembly	25,511 00	24,926 00	585 00	
Appropriations for Pay of Members and Attachés of the Legislature, Act of February 6th, 1855.				
For per diem and Mileage of Senators	33,000 00	33,000 00		
" " " Assemblymen	80,000 00	80,000 00		
" Pay of Officers and Clerks of Senate	29,997 00	29,997 00		
" " " " Assembly	33,724 00	33,724 00		
" Contingents of the Assembly, Act of March 16th, 1855	8,000 00	8,000 00		
" " " Senate " "	5,000 00	5,000 00		
" State Library, Act of May 1st, 1852	2,090 42	2,090 42		
" Postage, Special Act of February 21st, 1855	2,500 00	2,262 26		
" Salaries of State Prison Inspectors, Act of April 30th, 1855	6,793 33	6,793 33		
" Indebtedness of State Marine Hospital, Act of May 17th, 1853	24,629 28	24,629 28		
" " " " " April 16th, 1855	100,000 00	69,878 71	30,121 29	

TABULAR STATEMENT.—Continued.

DATE AND PURPOSE OF ACT.	Amount of Appropriation.	Amount Expended.	Amount Unexpended.	Amount Overdrawn.
For State Printing, Act of February 3d, 1855	$100,000 00	$100,000 00		
" Prosecution of Escheated Estates, Act of March 20th, 1855	30,000 00	14,143 00	$15,857 00	
" State Agricultural Society, Act of May 13th, 1854	5,000 00	5,000 00		
" Pay of Clerk of the Board of Examiners of War Claims, Act of February 14th, 1855	3,000 00	3,000 00		
" Protestant Orphan Asylum, Act of April 28th, 1855	5,000 00	5,000 00		
" Catholic Orphan Asylum, Act of April 28th, 1855	5,000 00	5,000 00		
" Law Library, Act of May 7th, 1855	17,250 00	17,250 00		
" Extra Work on State Prison, Act of May 5th, 1855	10,535 90	10,535 90		
" Portrait of General Sutter, " "	2,500 00	2,500 00		
" Expense of Preparing State Bonds, Act of March 16th, 1855	1,000 00	1,000 00		
" Expenses attending Northern Boundary Survey, Act of April 11th, 1855	1,374 95	1,374 95		
" Payment of State Prison Inspectors, Act of April 30th, 1855	500 00	500 00		
" Relief of S. R. Weed, Act of February 17th, 1855	50 00	50 00		
" " Wm. Coates, " "	50 00	50 00		
" " Frank Denver, Act of April 2d, 1855	1,000 00	1,000 00		
" " Knox & Farquharson, Act of April 2d, 1855	4,671 17	4,671 17		
" " A. T. Melvin, " "	18,420 00	18,420 00		
" " L. Bartlett, Act of March 29th, 1855	144 00	144 00		
" " B. B. Redding, Act of April 11th, 1855	9,979 91	9,979 91		
" " P. K. Woodside, " 4th, "	701 00	701 00		
" " Geo. Kerr & Co., " 11th, "	7,733 14	7,733 14		
" " H. B. & C. E. Paine, " 23d, "	197 00	197 00		
" " B. Wing, " 11th, "	54 00	54 00		
" " W. H. Williamson, " " "	36 00	36 00		
" " Addison Martin, " 2d, "	1,000 00	1,000 00		
" " Jesse Sawyer, " 27th, "	845 60	845 60		

For Relief of John F. Hayes, Act of April 27th, 1855	360 00	360 00	
" " James Austin, " 30th, "	2,935 80	2,935 80	
" " Annie V. R. Wells, Act of May 5th, 1855	1,333 33	1,333 33	
" " State Agricultural Society, Act of April 27th, 1855	1,500 00	1,500 00	
" " Wells, Fargo & Co., Act of May 7th, 1855	3,317 39	3,317 39	

Total Expenditures.....$1,337,496 64

[F.]

ABSTRACT

Of Property of all kinds, assessed for the year 1855, *and the amount of State Tax due thereon.*

COUNTIES.	Number of Acres of Land.	Value of the same.	Value of Improvments thereon.	Value of City and Town Lots.	Value of Improvements thereon.	Value of Personal Property.	Total Value of Property.	State Tax thereon, at 60 cents on each $100.
Alameda	207,544⅛	$1,636,947 00	$398,775 00	$294,114 00	$247,005 00	$981,519 00	$3,558,360 00	$21,350 19
Amador	..	..	..	..	..	..	..	..
Butte	371,008	455,251 00	406,607 00	..	..	405,351 00	2,267,209 00	13,603 25
Calaveras	36,173	55,225 00	..	96,135 00	484,485 00	1,292,132 00	1,927,977 00	11,567 86
Contra Costa	185,200	643,853 00	191,910 00	20,582 00	41,756 00	812,307 00	1,710,408 00	10,262 44
Colusi	253,139	358,812 00	81,634 00	3,110 00	28,515 00	787,482 10	1,259,053 10	7,557 32
El Dorado	..	223,853 00	..	93,315 00	327,940 00	1,885,380 00	2,530,488 00	15,182 92
Humboldt	..	..	238,956 00	..	..	228,205 00	467,161 00	2,801 28
Klamath	..	..	..	..	..	..	..	..
Los Angeles	1,318,776	404,825 00	429,415 00	71,905 00	322,603 00	1,332,621 00	2,561,359 00	15,367 35
Mariposa	..	544,000 00	191,120 00	..	..	527,867 00	1,262,987 00	7,577 92
Merced	4,444	5,555 00	65,051 00	..	..	424,411 00	495,017 00	2,970 10
Marin	284,949	346,920 00	47,775 00	13,460 00	26,120 00	476,345 00	901,589 00	5,409 53
Monterey	942,518	364,969 00	84,545 00	17,957 00	127,700 00	594,704 00	1,189,875 00	7,139 25
Nevada	..	..	..	..	..	..	2,304,019 00	13,824 11
Napa	266,346	903,114 00	242,570 00	16,890 00	59,725 00	903,316 00	2,125,615 00	12,907 50
Placer	..	..	..	..	..	..	1,804,089 00	10,824 53
Plumas	..	..	..	..	..	..	..	..
San Bernardino	1,446,309	56,903 94	4,020 00	7,082 00	3,803 00	240,969 25	312,778 19	1,872 89
San Francisco	215,500	758,880 00	..	18,624,375 00	8,392,425 00	5,065,347 76	32,841,027 76	197,046 16
San Diego	..	..	..	..	..	..	..	..
San Luis Obispo	348,021	94,252 50	47,978 00	..	..	237,997 50	380,228 00	2,281 37
San Joaquin	184,262	404,802 00	51,930 00	693,931 00	585,615 00	2,328,092 00	4,064,470 00	24,386 83
Santa Clara	284,414¾	2,390,719 00	648,475 00	323,905 00	432,897 00	1,647,784 00	5,443,780 00	32,662 68

Santa Barbara	891,576	2,302 68	35,260 00	11,526 00	79,960 00	480,021 00	837,035 00	5,022 21
Santa Cruz	..	..	..	..	..	..	1,014,971 00	5,773 24
Sacramento	..	132,780 00	508,721 00	3,580,569 00	1,803,706 00	3,271,858 00	9,297,634 00	55,785 80
Sutter	127,414	515,775 00	..	11,637 00	..	1,080,870 00	1,703,647 00	10,221 88
Solano	350,644	774,060 00	146,933 00	328,521 00	330,625 00	1,214,233 00	2,794,372 00	16,765 93
Sonoma	583,644	1,286,087 00	526,596 00	77,810 00	176,141 00	1,865,338 00	3,941,173 00	23,646 42
Siskiyou	..	..	532,305 00	138 00	56,459 00	1,629,726 00	2,218,481 00	12,759 70
Sierra	..	..	..	..	..	..	..	..
Shasta	31,811	39,744 50	175,435 00	650 00	310,195 00	1,132,376 50	1,658,401 00	9,950 41
Stanislaus	147,583	..	111,283 00	..	..	531,703 00	642,988 00	3,757 92
Tulare	..	..	..	..	..	..	..	..
Tuolumne	42,947	239,720 00	839,185 00	..	..	1,344,605 00	2,423,510 00	14,541 06
Trinity	22,578	114,467 00	295,770 00	..	..	346,307 50	642,077 50	3,852 46
Yuba	107,228½	534,779 00	595,020 00	1,389,826 00	800,730 00	1,789,449 00	5,109,804 00	30,658 82
Yolo	..	..	..	..	..	..	2,205,610 00	13,383 00
Totals	8,654,029½	$13,288,596 62	$6,897,269 00	$25,677,438 00	$14,638,396 00	$34,858,317 61	$103,897,193 55	$622,714 33

[G.] STATEMENT

Showing a General Abstract of Assessments of Real and Personal Property, from the organization of the State Government to the present Year, 1855, inclusive.

COUNTIES.	1850.	1851.	1852.	1853.	1854.	1855.
Alameda	..	..	..	$3,472,837	$4,383,179	$3,558,360 00
Amador	..	..	..	..	1,038,443	..
Butte	$268,294	$533,952	$853,955	2,024,142	1,895,526	2,267,209 00
Calaveras	266,078	..	808,450	2,129,966	..	1,927,977 00
Contra Costa	2,002,410	1,753,648	3,236,198	1,995,192	2,330,084	1,710,408 00
Colusi	..	367,661	966,840	1,470,131	1,505,178	1,259,053 10
El Dorado	572,410	697,651	1,831,801	3,660,369	3,278,324	2,530,488 00
Humboldt	..	..	..	..	826,119	467,161 00
Klamath	..	19,770	65,370	299,984	393,218	..
Los Angeles	1,931,403	2,187,992	2,256,125	3,193,487	3,659,040	2,561,359 00
Mariposa	..	160,435	1,216,557	1,681,422	1,676,583	1,262,987 00
Merced	..	..	..	..	..	495,017 00
Marin	1,006,893	756,375	932,192	..	..	901,589 00
Monterey	3,631,213	1,638,308	1,546,920	1,607,168	1,763,787	1,189,875 00
Nevada	..	686,080	956,925	..	1,750,810	2,304,019 00
Napa	918,164	803,140	1,289,048	1,527,902	1,404,206	2,125,615 00
Placer	..	304,192	1,365,985	1,196,975	1,551,757	1,804,089 00
Plumas	..	..	..	..	311,003	..
San Bernardino	..	..	..	304,086	305,232	312,778 19
San Francisco	21,621,184	17,794,711	18,481,737	32,377,893	35,796,475	32,841,027 76

San Diego	396,810	820,811	424,637	..	699,859	..
San Luis Obispo	577,618	460,530	512,324	421,750	516,441	380,228 00
San Joaquin	1,821,489	1,715,189	2,813,404	4,943,891	4,174,708	4,064,470 00
Santa Clara	4,883,295	2,934,183	3,292,153	4,428,976	6,582,062	5,443,780 00
Santa Barbara	992,676	821,000	989,686	1,136,654	952,065	837,035 00
Santa Cruz	..	1,184,821	1,095,094	1,085,400	1,470,878	1,004,971 00
Sacramento	8,947,454	6,331,024	7,232,026	8,252,920	8,775,966	9,297,634 00
Stanislaus	..	..	..	..	577,973	642,988 00
Sutter	1,292,618	741,732	617,894	755,304	1,243,148	1,703,647 00
Solano	2,709,246	1,178,756	2,896,795	3,851,048	4,580,498	2,794,372 00
Sonoma	1,187,672	1,627,572	1,657,091	2,880,309	4,098,630	3,941,173 00
Siskiyou	..	..	478,988	917,190	1,126,763	2,218,481 00
Sierra	..	..	657,976	777,784	1,389,042	..
Shasta	..	497,025	645,545	968,584	1,064,362	1,658,401 00
Tulare	..	..	..	199,914	193,137	..
Tuolumne	..	504,927	1,620,911	2,374,861	2,463,986	2,423,510 00
Trinity	..	215,812	233,873	526,615	477,055	642,077 50
Yuba	2,374,060	1,894,412	2,289,906	3,695,267	4,945,517	5,109,804 00
Yolo	269,702	599,343	1,321,969	1,177,625	1,990,576	2,205,610 00
Totals	$57,670,689	$49,231,052	$64,588,375	$95,335,646	$111,191,600	$103,897,193 55

[H.]

STATEMENT OF THE DIFFERENT FUNDS.

Cash on hand in State Treasury, as per State Treasurer's Report, July 1st, 1855, to the credit of—

Interest Fund of 1851	$10,762 57
" " 1852	21,780 90
State Prison Interest Fund	7,762 11
Hospital Fund	19,838 57
State Marine Hospital Fund	5,370 42
Sinking Fund of 1851	60,500 69
State Property Fund	26 81
War Fund	11 67
School Fund	8,718 21
Library Fund	1,251 83
Governor's Special Contingent Fund	418 67
Estates of Deceased Persons	89 09
	136,531 54
Deduct from General Fund amount overdrawn	1,506 98
Cash in Treasury, July 1st, 1855	$135,024 56

[I.]

STATEMENT

Of Temporary State Loan Bonds, issued under Act of February 1st, 1850; amount redeemed during each Fiscal Year, with Interest paid thereon, and the amount outstanding at the close of the Sixth Fiscal Year, ending June 30th, 1855.

TOTAL AMOUNT BONDS ISSUED, $290,100.	Amount of Principal redeemed.	Interest paid on am'nt redeemed.	Total Principal and Interest paid in redemption.	Principal outstanding.	Interest due thereon to April 22, 1854.	Total Princ'l and In'st outstanding June 30, 1855.
First Fiscal Year—ending June 30, 1850..	$2,950 00	$206 27	$3,156 27	$287,150 00		
Second Fiscal Year—ending June 30, 1851	122,150 00	34,419 18	156,569 18	165,000 00		
Third Fiscal Year—ending June 30, 1852..	47,675 00	27,369 16	75,044 16	117,325 00		
Fourth Fiscal Year—ending June 30, 1853	79,125 00	74,040 92	153,165 92	38,200 00		
Fifth Fiscal Year—ending June 30, 1854..	34,225 00	40,781 72	75,007 32	3,975 00		
Sixth Fiscal Year—ending June 30, 1855..	1,050 00	1,885 80	2,935 80	2,925 00	$3,963 95	$6,888 95
Total.....	$287,175 00	$178,703 05	$465,878 65	$614,575 00	$3,963 95	$6,888 95

[J.] SEVEN PER CENT. CIVIL BONDS,

Issued under Act of April 18th, 1851.

Total amount issued to June 30th, 1855		$458,500
Amount redeemed Third Fiscal Year	$19,500	
" Fourth Fiscal Year	34,500	
" Fifth Fiscal Year	70,500	
" Sixth Fiscal Year	60,500	
		185,000
Balance outstanding June 30th, 1855		$273,500

SEVEN PER CENT. CIVIL BONDS,

Issued under Act of May 1st, 1852.

Total amount issued to June 30th, 1855		$1,424,100
Amount redeemed Fifth Fiscal Year	$29,500	
" Sixth Fiscal Year	5,000	
		34,500
Balance outstanding June 30th, 1855		$1,389,600

STATE PRISON BONDS,

Issued under Act of May 11th, 1853.

Total amount issued to June 30th, 1855		$134,500
Amount redeemed Fifth Fiscal Year	$119,500	
" Sixth Fiscal Year	6,000	
		125,500
Balance outstanding June 30th, 1855		$9,000

SEVEN PER CENT. CIVIL BONDS,

Issued under Act of March 16th, 1855.

Total amount issued to June 30th, 1855 and outstanding.....	$700,000

[K.] CONTROLLER'S CIVIL WARRANTS.

Amount outstanding June 30th, 1854.....	$411,215 61	
Amount issued from June 30th, 1854, to June 30th, 1855	1,337,496 64	
		1,748,712 25
Warrants redeemed Sixth Fiscal Year.....	1,455,129 53	
Deduct for Certificates of Balances.....	3,186,58	
		1,451,942 95
Balance outstanding June 30th, 1855.....		$296,769 30

CONDENSED STATEMENT

Of the Civil Debt of the State, June 30th, 1855.

Three per cent. Bonds, Principal	$2,925 00	
Interest due thereon	3,963 95	
		$6,888 95
Seven per cent. Bonds issued under Act of April 28th, 1851.....		273,500 00
Seven per cent. Bonds issued under Act of May 1st, 1852.....		1,389,600 00
Seven per cent. Bonds issued under Act of March 16th, 1855		700,000 00
State Prison Bonds issued under Act of May 11th, 1853.....		9,000 00
Controller's Warrants outstanding.....		296,769 30
		2,675,758 25
Deduct cash on hand in Treasury.....		99,299 29
Total Civil Debt Proper....		2,576,458 96
Amount due School Fund for School Purposes.....		464,000 00
		$3,040,458 96

[L.] WAR DEBT OF THE STATE,

June 30th, 1855.

Twelve per cent. Bonds issued under Act of 1851,	$200,000 00	
Interest due thereon	99,812 20	
		$299,812 20
Seven per cent. Bonds issued under Act of 1852.	631,015 00	
Interest due thereon	116,000 00	
		747,015 00
Warrants unfunded		14,351 39
Total		$1,061,178 59

[M.] ESTIMATE

Of Receipts for the Seventh Fiscal Year, ending June 30th, 1856.

Property Tax	$450,000 00
Poll Tax	65,000 00
Foreign Miners' Licenses	160,000 00
Auction Duties	20,000 00
Consigned Goods	15,000 00
Commutation Tax	20,000 00
Military Tax	500 00
Fees from Secretary of State's Office	3,000 00
Possessory Claims	500 00
Swamp and Overflowed Lands	15,000 00
State Licenses	80,000 00
Estimate of Total Receipts	$819,000 00

[N.] ESTIMATE

Of Expenditures for the Seventh Fiscal Year, ending June 30th, 1856.

For Salary of Governor	$10,000
" Controller of State	4,500
" Treasurer "	4,500
" Secretary "	3,500
" Superintendent of Public Instruction	4,500
" Surveyor-General	2,000
" Quartermaster-General	3,000
" Attorney-General	2,000
" Governor's Private Secretary	2,500
" Secretary of Supreme Court	3,000
" State Prison Directors and Attachés	50,000
" Justices of the Supreme Court	27,000
" District Judges	50,000
" Clerks in Controller's Office	9,720
" " Treasurer's "	6,480
" " Secretary of State's Office	9,720
Per Diem and Mileage of Assemblymen	96,400
" " Lieut. Governor and Senators	41,500
Pay of Officers and Clerks of Assembly	30,000
" " Senate	20,000
Contingent Expenses of the Legislature	20,000
" " Supreme Court	6,000
" " Controller's Office	4,000
" " Treasurer's "	4,000
" " Secretary of State's Office	4,000
" " Sup't. of Public Instruction's Office	2,500
" " Surveyor-General's Office	2,500
" " Quartermaster " "	2,500
" " Attorney-General's "	2,500
" " Governor's "	2,500
Governor's Special Contingent Fund	5,000
Support of the Insane Asylum	50,000
Salaries of Physicians of Insane Asylum	8,000
Transportation of Prisoners	50,000
Distributing Laws and Journals	1,000
Translating Laws	3,000
Prosecuting Delinquents	5,000
Indexing Laws and Journals	2,600
Expenses of State Prison, (including labor and provisions,)	60,000
Printing, Paper and Official Advertisements	90,000
Total	$705,420

[O.] WARRANTS

Drawn from July 1st, 1855, to December 20th, 1855.

On General Fund	$461,958 92
" Miscellaneous Funds	41,624 53
Total amount issued	$503,583 45

[P.] CIVIL DEBT OF THE STATE,

December 20th, 1855.

Three Per Cent. Bonds, Principal and Interest		$6,888 95
Seven " " issued under Act of April 28th, 1851		268,500 00
Seven " " " " May 1st, 1852		1,390,300 00
Seven " " " " March 16th, 1855		700,000 00
State Prison Bonds, " " May 11th, 1853		9,000 00
Controller's Warrants		568,687 52
		2,943,376 47
Deduct amount of Cash in Treasury appropriated for the payment of the above indebtedness		42,106 01
Total Civil Debt proper		2,901,270 46
Amount Due School Fund for School Lands		464,000 00
Total		$3,365,270 46

WAR DEBT OF THE STATE,

December 20th, 1855.

Twelve Per Cent. Bonds, issued under Act of February 18th, 1851	$200,000 00	
Interest Due thereon	111,145 53	
		$311,145 53
Seven Per Cent. Bonds, issued under Act of May 1st, 1852	633,965 00	
Interest Due thereon	136,500 00	
		770,465 00
Warrants not Funded		14,835 39
Total		$1,096,445 92

Statement of Receipts into the State Treasury from July 1st, 1855, to December 20, 1855, inclusive.

RECEIVED FROM	Poll Tax of 1854.	Poll Tax of 1855.	Property Tax of 1854.	Property Tax of 1855.	Foreign Miners' Licenses.	Merchants' Licenses.	Bankers' License.	Brokers' License.	Gaming License.	Peddlers' Licenses.	Circus License.	Theater License.	Billiard and Bowling Alley License.	Auction Licenses.	Auction Duties.	Pensionary Claims.	Fees from Secretary of State's Office.	Fines for violation of Revenue Laws.	Insurance Companies.	Military Tax.	Swamp and Overflowed Lands.	Consigned Goods.	COUNTIES.	TOTALS.
Alameda County	$232 58		$1,735 86	$9,000 00				..	..	$116 40		..	$189 15		..	..	..	..	..	..	..	..	Alameda County	$11,273 99
Amador "	1,574 34	$445 23		1,143 28	$6,542 62	$43 65	$208 55	..	..	174 60		..	351 62		..	..	..	..	..	..	..	..	Amador "	10,483 89
Butte "		3,127 57	337 07		6,903 98	..	..	..	..	111 55		..	..	..	..	..	..	..	..	..	..	..	Butte "	10,480 17
Contra Costa "	102 55		1,265 20	..	..	..	..	..	..	58 20		$9 70	72 75	$20 82	..	..	..	..	..	..	..	..	Contra Costa "	1,529 22
Colusi "	43 59	349 20	1,763 91	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Colusi "	2,156 70
El Dorado "	5,661 40	11,620 00	3,108 31	..	27,279 18	..	..	..	$512 80	1,236 75	..	..	329 80	916 65	35 26	$22 39	..	..	$101 37	..	..	..	El Dorado "	50,824 00
Humboldt "	31 14		1,064 43	..	..	..	..	..	..	..	..	..	..	29 10	..	..	..	..	..	..	..	..	Humboldt "	1,124 69
Los Angeles "	184 61	807 28	1,596 73	10,312 22	..	..	..	$74 10	..	366 90	..	..	..	229 15	59 10	12 83	..	..	..	..	..	..	Los Angeles "	13,342 92
Mariposa "		455 52	2,824 57		11,731 38	38 80	..	..	..	87 30	..	..	19 40	175 24	..	..	$26 67	..	..	..	..	..	Mariposa "	15,361 88
Monterey "	38 72		577 69	..	..	..	..	..	..	..	..	..	..	109 13	..	..	..	..	..	..	..	..	Monterey "	525 54
Nevada "			5,648 72		7,131 38	..	..	..	..	..	..	..	..	63 05	..	..	..	..	..	..	..	..	Nevada "	12,843 15
Napa "	448 42		635 50	..	..	..	..	..	..	106 70	..	..	..	29 10	1 55	..	..	..	..	..	..	..	Napa "	1,221 27
Placer "		1,343 58		3,815 16	8,170 53	..	..	145 50	..	397 70	..	106 70	..	357 08	89 33	21 27	..	..	..	..	..	..	Placer "	14,426 85
Plumas "		527 80	570 53	960 07	2,306 05	..	..	..	..	29 10	..	..	..	128 52	..	..	21 83	..	..	..	..	..	Plumas "	5,053 15
San Francisco "			14,586 67	..	..	..	..	..	669 30	29 10	..	..	..	113 98	1,506 45	2,743 80	..	..	$97 00	..	..	$10,625 62	San Francisco "	31,001 88
San Diego "			552 27	..	..	..	..	..	..	..	..	..	..	130 95	58 20	74 30	..	..	..	..	..	..	San Diego "	815 72
San Joaquin "		546 28		16,558 79	246 90	560 18	87 30	..	..	232 80	..	24 25	..	225 52	..	114 79	7 28	..	..	..	$2,267 17	..	San Joaquin "	20,911 26
Santa Clara "		1,372 20		20,455 43		14 55	..	..	..	1,010 14	$14 55	..	..	271 60	..	..	..	..	..	$38 16	..	..	Santa Clara "	23,176 63
Santa Cruz "	25 98	34 82	1,010 77	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Santa Cruz "	1,131 67
Sutter "			853 11	..	..	..	..	..	..	..	..	..	..	..	..	7 28	..	..	..	..	..	..	Sutter "	870 39
Sonoma "	789 42		2,158 40	..	..	..	..	..	..	29 10	..	..	..	..	..	..	..	..	..	..	..	..	Sonoma "	2,976 92
Solano "	20 95		6,673 50	..	..	..	..	..	..	58 20	..	..	..	210 98	..	..	..	..	..	..	693 26	..	Solano "	7,656 89
Siskiyou "		968 23		907 77	21 83	43 65	203 70	..	..	116 40	..	..	..	518 95	..	92 06	7 28	..	130 95	..	..	..	Siskiyou "	3,010 84
Sierra "	145 65		70 77		3,610 17	..	29 10	..	305 55	155 20	..	..	..	820 14	34 83	..	..	..	..	..	..	..	Sierra "	5,171 41
Shasta "	32 60		343 40		2,270 97	203 70	174 60	..	247 35	48 50	..	..	..	..	..	..	..	..	..	..	..	..	Shasta "	3,321 12
Stanislaus "	65 18		1,019 22		29 10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Stanislaus "	1,113 50
Tuolumne "		1,001 04	114 60		6,763 92	29 10	178 48	48 50	..	1,612 14	67 90	14 55	315 74	..	..	90 70	..	..	..	..	..	..	Tuolumne "	10,236 67
Trinity "	..	..	..		3,114 76		43 65	29 10	..	1,474 40	..	..	14 55	..	..	..	..	..	..	..	..	..	Trinity "	4,676 46
Yuba "		2,224 51		3,368 05	7,631 48	160 05	82 45	..	..	..	..	77 60	123 67	485 00	230 75	..	..	..	..	..	..	..	Yuba "	14,313 56
Yolo "	230 25		2,988 47	..	..	..	..	..	..	261 90	..	..	..	..	..	14 55	..	..	..	..	..	..	Yolo "	3,495 20
Secretary of State	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	$1,256 25	..	..	..	..	..	Secretary of State	1,256 25
Totals	$9,627 41	$24,523 38	$51,369 72	$66,560 77	$93,754 25	$1,602 93	$1,822 63	$180 80	$1,065 79	$8,223 94	$82 45	$582 00	$5,379 62	$2,380 54	$3,392 89	$84 89	$1,256 25	$232 32	$97 00	$38 16	$2,960 43	$10,625 62	Grand Total	$285,783 79

Document No. 4.

IN SENATE.] [SESSION OF 1856.

FIFTH ANNUAL REPORT

OF THE

SUPERINTENDENT

OF

PUBLIC INSTRUCTION,

OF THE

STATE OF CALIFORNIA.

JAMES ALLEN, STATE PRINTER.

REPORT.

To the Senate and Assembly of the State of California:

The undersigned has the honor to submit the Fifth Annual Report from the Department of Public Instruction as required by law.

Public sentiment was never more thoroughly aroused than at the present time, in respect to the subject of education. From the Colorado to the Klamath, from the Nevada Alps to the Ocean, the most distinguished citizens of this State are laboring to extend the influence and elevate the condition of the common school.

With this healthy state of the public mind, and in view of the fact, that we are, in respect to common school education, not only very far in arrear to our Atlantic brethren, but also to civilized Europe, there never has been a time when the support of the representatives of the people to this great effort was more imperiously called for. Hitherto, much legislative labor has been bestowed upon this subject, too much of it has been misdirected. Our system is too cumbrous and intricate. It presents the picture of a beautiful machine that requires practice to comprehend, and more coin fuel to propel it successfully than has yet been provided.

SCHOOL FUND.

We are nominally possessed of a large *School Property*, but practically do not receive enough income to pay the salaries of *three hundred and six* teachers for two weeks' work in the six months of their labor, for which the small sum of $28,269 60 was apportioned by the State Board of Education on the 1st instant, being the entire income to the State School Fund for the past half year. We are indebted to the Legislature of 1852, for the first enactment, under the Constitution, in relation to common schools. The fund accrued since then has been apportioned by the State Board of Education as follows:

January 1, 1854—To 53 Schools: 56 Teachers, 10,953 Children, $53,511 11; being $955 average to each Teacher, and $4 88 to each child.

December 31, 1854—To 168 Schools: 214 Teachers, 20,075 Children, $39,-104 78; being $182 50 average to each Teacher, and $1 95 to each Child.

June 30, 1855—To 221 Schools: 304 Teachers, 26,170 Children, $24,558 21; being $80 77 average to each Teacher, and $0 94 to each Child.

December 31, 1855—To 221 Schools: 304 Teachers, 26,170 children, $28,-269 60; being $93 average to each Teacher, and $1 08 to each Child *resident;* but increased to $1 20 to the recipient each, by consequence of not maintaining schools as required by law in many districts from whence returns of the number resident were made.

Thus, it will be perceived that, whilst the number of teachers has been *increased five and a half times*, their number of two years ago, the fund apportioned to each has an average *decrease to two-elevenths* of what it then was.

The session of 1852 provided wisely a State tax of five cents on the hundred dollars for the support of schools, from which, in the uncertainty of all collections at that time, little was received into the School Fund, and the session of 1853 struck off even this support. The session of 1854 partly, no doubt, with the view to reduce the amount of odium that always attaches to the poll tax, provided that one-fourth of the net receipts into the State Treasury from poll tax should be placed to credit of the School Fund. There had been some aid received from the five cent taxation of 1852; and the cutting off, by the Legislature of 1853, has been, to a limited extent, remedied by the Act of 1854, giving us a crumb in exchange for sweetening the poll tax.

The Annual Report from this Department to the Legislature of 1855 (Doc. 4, Assembly Journal), held this language: "Three-fourths of the children of our State are growing up devoid of learning to read or write." "So far from expecting a future increase proportioned to the imminent wants of this great community, it is evident that without radical and positive change in the *supplies*, by legislative action, we shall have a meager return for the present year from the schools, many of which are now being abandoned for lack of support." The Legislature of 1855 did not extend the aid solicited from this Department, and many schools *have* been abandoned for lack of support. I apprehend that not more than one-third of the teachers named in the Appendix to this Report, were teachers in the list for 1854. Yet there is a mighty influence in support of the common school, that has brought us to the close of another year, with an increase of nearly fifty per cent. in the number of teachers, with a very large increase in the average attendance of the pupils; still leaving us, however, the bitter, unhealthy, humbling message to present you, that of the 26,170 reported as resident of school districts, (to which I will not add the non-reported,) there are but 6,422 daily in the schools. The reiteration of the report of last year becomes my painful duty, that "three-fourths of the children of our State are growing up devoid of opportunity of learning to read or write." In the City of San Francisco, where the effort to sustain common schools has deservedly won her a world-wide reputation, (and as a natural consequence amid all her disasters, put her Bonds at a premium,) in that city there is a daily average of 2,938 children reported out of school, and in the county districts of San Francisco, forty-five only of 409 are in the school. In Stockton, nearly one-half are in daily average attendance. Sacramento City, two in five; and Marysville, but one in three—no doubt in many cases owing to the wilful *neglect* (if so mild a term can properly be used,) of the parent or guardian. In some places, as will appear by the Appendix, but one in seven are in daily attendance at the school.

Santa Clara County, the very garden of California, reports 255 daily attendance, of 1,751 resident. In that county, the defalcation of her Treasurer, Akenhead, robbed the children of seven thousand two hundred and thirty-five dollars and eighty-nine cents, paid to him in coin from the State Treasury, for the use of the schools of the county. The rest of that defalcation is but partially developed by the return before us. He that robs a fund so sacred as that of Public Schools, brings upon his head the resulting consequences to all affected by it. If by the aid of that fund the child had been reared to honor, that now commits the theft, murder, or other deep degrading crime, think you, Mr. Akenhead, that *your* hands are clean of that murder? Be not deceived; the blood of the victim, and the crime of the assassin, are alike upon *you*. *You* have deprived that boy of his right to an education. *You* have stolen it from him. *His* crimes are upon *you*, and upon every Akenhead of the land. What shall a man gain in exchange for his

soul? He may be devoid of conscience, and hardened in crime, but he will find the devil a great stickler for *his* right, and will *surely* have it. In other words, the day of torturing conscience will surely come to him, "that taketh award against the innocent."

Of the 26,170 resident children reported, 6,422 form the daily average attendance at the common schools. The private schools will not probably increase the number beyond 7,000 in all. What is to be done with the 19,000? They are under the charge of this Department, subject to legislative action.

Is it necessary at this day to name the intelligent action of the Atlantic States, where scores of thousands of the children of our citizens are being educated, the fathers *widowed* from their dearest care? To Louisiana and other States of the South? To the millions appropriated by the cities of the Middle and Eastern States? To this first care of the great West? Is it necessary to quote here the systems of the Swiss? Of Prussia, where "all are educated?" The English? or even that of France, where for twenty years past especially, through her Minister of Public Instruction, she has been moving toward the first rank, in universal primary education—as she has for centuries commanded the first in the most elevated sciences? Is it necessary to refer honorable members of your body, who have aided in this great work in other States, to their own experience, in respect to the effect of popular education, upon the subsequent success of communities, and of the nation? The representatives of the most intelligent *adult* population of the world, need no such monition. True, our State is largely involved in unyielding debt, scarce a dollar of which, however, has been incurred for the support of the common schools. With the capitalist, the stability of a State is measured more by the support she gives to the education of her youth, who will become by and by the *paymasters* of the debt, than is generally considered or credited by statesmen. I venture the opinion that California State Bonds would command a premium to-day, were it known that a reasonable portion of the debt had been incurred in the education of her youth. Hence, under the circumstances, I do respectfully, but most earnestly, recommend, that a direct appropriation be made to the School Fund, in bonds of the same character, and with the same guaranties as those issued under the Act of 1855, to the extent of one hundred thousand dollars. I promise on the part of those for whose benefit they may be issued, their prompt re-payment without grudge or stint; and I hold that in this age of reform and progress, that man must be far in the rear of advancing civilization, who opposes honestly the sentiment, that the entire property of the State is bound primarily to the proper education of all the youth within her border. They are destined soon, as citizens, to direct, command and develop her future resources, and her future fortunes. Lads now in or out of the school room, will succeed you in the halls of legislation, and succeed, in all the busy affairs of the country, the present occupants. This may not be too often repeated, nor the truism of the poet, "As the twig is bent the tree's inclined," to warn the wary sentinels that guard the future welfare of our country, how readily, by neglecting to educate her youth, California may be made to recede, in all that most embellishes a nation.

SCHOOL LANDS.

It is the sheerest folly to talk about our great resources in public school property, whilst no proper measures are taken to secure it from loss, much less to realize the income due from it.

All the lands within our boundary have been, by Act of Congress, virtually declared public domain, subject to confirmation of grants made by the Mexican Government to the several claimants under inchoate titles. The Act of Congress

in relation to survey and pre-emption, (March 3d, 1853,) provides, that two sections of every thirty-six, when surveyed, be set apart for the school purposes of the township. That where the 16th or 36th section has been settled upon before survey, or "taken by private claims," other lands shall be selected by the proper authorities of the State in lieu thereof," agreeably to the provisions of the Act of Congress approved the 20th May, 1826, entitled, "An Act to Appropriate Lands for the Support of Schools in certain Townships and fractional Townships not before Provided for, and which shall be subject to approval by the Secretary of the Interior." The Act of May 20th, 1826, requires the selections in lieu of the 16th or 36th section or fractional townships, to be made from "any unappropriated public lands within "the *land district*, where the township for which any land may be selected, may be situated." I respectfully recommend that so much of the Act of the session of 1855 as limits the selections in lieu of the 16th or 36th sections, and of fractional townships, to be made from "the township," or "adjoining township," be repealed, and that the limitation be applied in accordance with the Act of Congress, to "any unappropriated public land within the *land district*." The selections may then chance to be made from lands of value, instead of taking the worthless land that remains unoccupied in the township or adjoining township.

With regard to the proper legislation in respect to the *disposition* of the township school lands, I respectfully refer to the various Acts of Congress quoted in my last Annual Report, (Doc. 4, Assembly Journal, 1855,) and to the proposed changes in the law hereinafter named.

Of the 500,000 acres donated under the Act of Congress, April 4th, 1841, and diverted by our Constitution to school purposes, the greater part remains undisposed of.

The aid to the *University* that we hope some day to see established, from lands donated by the General Goveroment, like that from nearly all the school lands, continues a deferred hope, upon which the mind may look at at so great a distance as to realise little else than the clouds that environ it.

I respectfully recommend that all the school property in lands or otherwise, be placed under the immediate charge of the State Board of Education, with proper powers and restrictions in respect to selection and disposition of such as do not belong to the township; and that the township school lands be placed under charge of the Township Trustees or Commissioners, elected one in each year, to serve three years, in the manner proposed in the last Annual Report from this Department. Placing upon the Trustees such restrictions, and clothing them with such powers as a body corporate may best exercise to the advantage of the schools.

The experience of the last two years in respect to the school property, has strongly confirmed me in the opinions I had the honor to submit to the Legislature of 1854, a part of which as immediately applicable, are here quoted from Doc. 6, Assembly Journal, 1854:

"The interest only of the School Fund can be used, and hence I suggest, that the settlers on the 16th and 36th sections, who choose to decline the exercise of their pre-emption rights with the U. S. Government, be permitted, with consent of the Township School Commissioners, to file their bonds to the township, with lien upon the lands, providing for the payment of $1 25 per acre after —— years, and paying *in advance* each year, the interest upon the same, at the rate of ten per cent. per annum, to the proper officer, for township school purposes.

Thus, if the whole of the school lands in each township of 36 sections be settled upon, they would produce to the township (six miles square,) the annual interest (on best security) of $160 on $1,600 of capital.

Each township of six miles square may be expected to maintain a school, and this sum, though small, would be sensibly felt in the rural districts of the State,

being applied only to cases where the Town School Commissioners deem it preferable to locating elsewhere their two sections. It must be borne always in mind, that the 16th and 36th sections belong peculiarly to purposes of education within the township, and cannot properly go to the State Fund. An Act to regulate the manner of proceeding in this relation, becomes imperatively necessary. It may be expected that the people of the township immediately interested, will, better than anybody else, husband the small means provided, and they should be sustained by the necessary enactments of law.

Provision should be made in every township now established, and in every township of six miles square, as soon as surveyed, not only for the election of School Commissioners, but also for the levying of such rates of taxation as they may deem necessary to support one or more schools, *free of charge to all children within the township.* This should be made imperative, and in the event of any township failing to take such action, it should be made the duty of the County Supervisors to fix the rate of taxation for school purposes within the township so neglecting the duty.

An Act amendatory to the existing law comprising the above named, as well as an amendment providing that the school moneys shall be distributed in proportion to the *average attendance*, instead of the number resident, I deem of pressing importance to the success of the system. Under existing law, it is made the interest of the schools established within a district, to prevent the establishment of others to share the funds.

The inquiry, what shall be done in respect to the remaining 268,820 acres of the 500,000? I should answer in this way. I would suggest that the Act of 1852, for the disposition of these lands, be so modified as to reduce the price to $1,25 the acre, payable within —— years to all actual settlers, payment to be secured to the School Fund; and the failure to pay ten per cent. per annum interest, *in advance*, to the County Treasurer of the county wherein the land may be situated, and the forwarding of the Treasurer's duplicate receipt therefor to the Controller of the State, to be charged against him, should work a forfeiture, and subject the land to sale for the use of the School Fund, to the highest bidder. I would further suggest, that parties locating and not occupying, should pay $— the acre, in cash or State securities, or within —— years; and that upon the payment of the interest of ten per cent., one year in advance, or cash, or State securities, they receive certificates of ownership, entitling them to register as the agents of the State, and providing therein for a forfeiture of title by non-payment of the subsequent annual interest, in advance, as before suggested.

The Seminary lands awaiting only the U. S. surveys, to be fully and conclusively located, I recommend to be placed at once under the entire title, control, and management of the Board of Regents of the University, which I cannot doubt the Legislature will provide for at an early day, in 'An Act to Establish the California State University.'

It may be expected that the Regents will be selected from the several judicial districts, of gentlemen of distinguished ability and integrity of character, and that their disposition of this boon from the General Government, will be worthy themselves, and the great object of the paternal donation. I know of no impediment to the organization of the State University, upon such basis as to meet the peculiar wants of our State."

Two years have passed since I had the honor to submit these suggestions. Every hour of delay since then has impoverished, to nearly a total loss, the school property, and kept in other States the children of our citizens, prepared to enter their High School, or University studies.

SCHOOL LAW.

Since the enactment of the Common School Law of 1852, each successive Legislature has made some changes, but no law has yet been passed that is not far behind the advanced progress of most other States. We have *no free school system.* Cities are empowered, under certain restrictions, to raise means and, to a certain extent, maintain free schools. The counties may or may not levy a limited tax, to maintain schools, depending upon the views of the Board of Supervisors, a Board that has done more good in checking extravagant county expenditures than was anticipated, even by the best friends of the supervisory system; but with heavy old county debts too often pressing upon them, they are timid, and too frequently parsimonious in respect to the schools. In some densely settled counties no tax whatever has been levied for school purposes; moreover, the supervision of the accounts for school expenditure of the county, is not as thorough by the Board of Supervisors as could be desired, otherwise the returns to this Department would be more explicit and satisfactory. Whilst some of the Treasurers have made their returns with that exactitude that was expected from them, others, from various causes, especially that of being newly inducted into office, are unsatisfactory, as will be perceived by the tables annexed, collated from the various county reports.

The Act of 1855 bears the impress of a mind thoroughly versed in educational matters; but I differed in opinion with the distinguished author, in respect to many portions of it then, and the views then expressed I feel it my duty to reiterate now. I think we may properly relieve our County Treasurers of this portion of the burdens of their office, dispense with the taking of the census and, with the exception of the cities, do without Superintendents. The County Superintendent is an officer of great value to the system, in densely settled States, as New York, Ohio, and others. In California we are not yet prepared for it. Our County Superintendents complain, with justice, that they are not in many cases repaid *their expenses*, much less allowed for the time devoted to their duties. The Supervisors respond, that even these payments, so justly due and properly earned, are too great a tax upon the funds of the county. Some Superintendents have to make a circuit of many hundreds of miles, in order to visit as required by law, each school in the county. In some cases the expense is more than can be regained by the good accomplished. In other cases, and I am happy to know that they are many, the ability displayed by the County Superintendents has been mainly instrumental in reinvigorating the schools—in some cases at great sacrifice of time, and without any pay whatever. They cannot give their time, talent and money, without a reasonable reimbursement. In many cases those elected have declined to qualify for their office, after considering the duties, responsibility and pay. Hence, we want a different system.

I respectfully recommend that the law be so modified as that the common schools be managed by the people of the school *district*, connecting immediately with the State Department, and without the intervention of any county officer. In other words, to adopt the New York system, so far as applicable to California. That on the first Monday of May (when no party excitement interferes,) there be elected in each school district one Trustee, to serve for three years—there being at the first election, three chosen, one to serve for one year, another for two, and a third for three years, to be constituted a body corporate, and be charged with the care of the school property, in lands or otherwise, of the district, to be under the general supervision of the State Department, and account for the manner of expending the State Fund apportioned, as well as in all matters pertaining to the schools of the district. At the same time, there should be elected a township or

district School Treasurer, and collector of school tax, the latter to be furnished annually with an abstract from the Assessors' list of taxable property.

The people of the township or district, and the city corporation, at such annual meeting, should decide upon the amount of taxes required to be levied, in order to maintain at least one school within every space of six miles square, and fix the rate for that year.

That all future division of State or county funds be made to districts directly, from the State Department, or Board of Supervisors, and be apportioned in accordance with the *daily average attendance*, as recommended from this office in 1854. It was then said, that the cities would thus have undue advantage over the country districts. The reports annexed I do not think bear out that view. The effect to stimulate a larger attendance would be of great service, and the onerous charges upon the counties for census-taking every year, should be abandoned.

The reduction of the charges upon the county thus provided, would result in giving greater ability to the townships to maintain their schools, under *their own immediate care*, with the supervision and in direct communication with the State Department, and not subject them to the differing views of the County Supervisors; to the differing views of the County Superintendent; to the cost of travel upon the uncertain errand of obtaining from the County Superintendent an order for payment of salary or other expense, with which another voyage of uncertainty is made to the County Treasurer, and repeated heretofore so often, and under so many disappointments, and attended with so much expense—that the wonder really is that any schools have been kept up *at all*, oppressed by so many vexations, and attended with so much unrequited expense.

CONTINGENT EXPENSES OF THE OFFICE.

The failure of the last session to appropriate the necessary funds for the usual expenses of conducting the business of this Department, in manner provided for and required by law, has imposed upon the Superintendent considerable expenditures, that remain unpaid, and has prevented those visitations to the counties that might reasonably have been expected from him.

MANAGEMENT OF THE SCHOOLS.

Whilst we recommend the enactment of laws requiring each township to sustain schools, they should be made to move under uniformity of system; and that system, both in the law and in the execution of the law, be made to conform to the more recent improvements in the management of the school.

Immediately upon entering upon the duties of this office, I designated, in accordance with the Act, a uniform series of books to be used in the schools. The recommendation has not been sustained, and the Superintendent has no power to enforce it. The books designated comprised the very latest and most improved works used in the Atlantic States; but our bookstores were so crowded with the refuse books thrown out at the East, at low prices there, at least, that the most valuable works, adapted to the advanced progress of the common school system, could scarcely be had.

At the present time, however, most of the booksellers in San Francisco are being supplied. Many teachers, also, prefer to use the books studied by themselves, to the trouble of hearing recitations from works with which they have not been familiar, and lack the energy to become so. The disadvantage to the pupils from this source, especially when changing their teachers, is very serious, and

should not be imposed upon them. The same books should be used in every school of the same grade throughout the State. I append hereto a list of those designated, as now revised, for the future use of the schools, and recommend more decided legislation upon this point. Our teachers, however, rely too much upon *the books*. The silent type needs the aid of the active and earnest teacher's *voice*, to develop and sharpen the perception, and strengthen the judgment of the young mind. It is a fraud upon the community for trustees to employ or retain a teacher that is content to have his pupils answer in *form* the printed questions before them, without presenting the necessary collateral information, in manner to insure the proper practical application, whenever needed.

The Superintendent has no adequate power under the existing law, to check as should be done any SECTARIAN bias or control, exercised upon the public schools. A sectarian war is in embryo, which if not quieted at once will, combined with other causes, produce a lingering death, slowly but surely, to popular education in this State. The rejection of well qualified teachers at one time, because of their religious faith, produces a reacting opposite extreme at another time, and the whole catalogue of sects become excited to have their own members used as teachers, and their own churches as school houses. This is all wrong, and the result will be disastrous. None but Sabbath Schools should be taught within the temple grounds dedicated to the especial purpose of worshiping the omniscient God. Here, sectarians may rightfully and freely inculcate, directly and indirectly, that creed upon which they build their hopes of salvation; and here, indeed, are oftentimes formed and embellished, minds that shed benignant luster upon the moral world. Whether the holy place be occupied by Jew or Gentile, Catholic or Unitarian, Presbyterian or Quaker, Methodist or Mormon, there let the road to heaven, through all its length of hope and trial, be portrayed to the youth by Sabbath School or other religious instruction. They are *not the places*, however, nor is the bigot to any creed whatever *the teacher*, that should take part in the common school system. The Jew and Gentile, Turk and Christian, meet here on common ground; to enlighten the understanding, to elevate the morals, to correct the temper, and to form the manner of the youth for future usefulness, as citizens of the republic. Whilst we thus maintain intact, steadily but firmly, the proper administration of the common school system, let us not undervalue the efforts making by, emphatically, the *good* men of our land, in rearing colleges worthy the support of the State, though established by religious influence and controlled by religious domination. Three colleges have been chartered in accordance with law during the past year: one at Santa Clara, under charge of the Methodist Society; one at Oakland, under charge of the Presbyterian Church, and one at San Jose, under care of those who profess the Catholic faith. They are all struggling in their infancy, but destined to much good. I recommend that a liberal appropriation be made to each of these colleges.

CONCLUSION.

When I sought the opportunity to be charged with the fulfillment of the duties of this office, it was in the hope, and grealty with the will, to extend the cause of education throughout the State. It is the great safeguard of every nation's true prosperity—the elevation of the masses.

From the solitary teacher of a *very* common school in 1849, at San Francisco, my predecessor had witnessed their increase to *fifty-six* during his term of office. I have just reported to your honorable body nearly six times that number, with a just demand for a quadruplication of the present force. Many private boarding and day schools have been established, some with pre-eminent success. What-

ever diversity of opinion may prevail among political parties in respect to other affairs of government, the common school platform has been found broad enough for all to stand upon, that desire to be sustained by the popular will. All agree, that upon this mainly depends the future hopes of our beloved country,—in sustaining the great principle, that the people are capable of self-government. All the giant strength of this, with most of us, our adopted land, whatever we cherish in the future of the beautiful and rich commonwealth of California, depends upon this short sentence, "The education of *all* the people."

If we be doomed to the eternal disgrace of prevalent ignorance in our land, we shall as a consequence, linger in crime, and finally fall, receiving in place of honored remembrance, the merited contempt of mankind. If, on the contrary, this almighty element of a nation's force be cherished and sustained, in a manner worthy the subject, and worthy the counsels of your honorable body, the world combined can never conquer us—will never desire to undertake it.

Strong in the sympathies of the good, great in our natural resources, stimulated by the energies that accompany knowledge, our rank will be continuous in the front, till progressive civilization encircles the globe.

PAUL K. HUBBS,
Superintendent of Public Instruction.

Department of Public Instruction,
Benicia, January 17th, 1856.

APPENDIX A.

The following named books are recommended to be used in the public schools of this State, in addition to such alphabetical and other Cards, Charts, Globes, etc., as the good judgment of the Trustees and Teachers may direct:

MUSIC.*

Perrot's Welhem's Musical Manual. Biddle, Philadelphia.

ORTHOGRAPHY.

Goodrich's Common School Primer, especially where you have no Alphabet Cards. The print of the Alphabet is large, and may take the place of the Card.

Noah Webster's Elementary Spelling Book. *Coolidge's pictorial edition*, to be used also as a Primary Reader.

READING.

Tower's series (excepting First and Second Class Reader). Burgess & Co., New York.

Town's Fourth Reader; Swan's Instructive Reader; Zacho's New American Speaker. Barnes & Co., New York.

WRITING.

Rand's series of Copy Books. E. C. Biddle, Philadelphia.

Alphabetical Outlines in German Text, Old English, etc. Biddle, Philadelphia.

ARITHMETIC.

Colburn's Intellectual, upon the inductive method, *followed* by Greenleaf's National.

* The system introduced by the Minister of Public Instruction in France, some years ago, is now universally used in the European Schools and being rapidly introduced into the Common Schools of the Atlantic States; also serving admirably to prepare the voice and manner of pronunciation. A great collateral benefit.

GEOGRAPHY.

Mitchell's Series, latest edition; Parley's New Geography for Beginners, may be used as a Primary Terrestrial Globe (may be had at $10 to $25 in San Francisco). Outline Maps and Mitchell's World.

ETYMOLOGY.

Lynd's First Book; Lynd's Class Book. Biddle, Philadelphia.

COMPOSITION.

Quackenbo's First Lessons, connected with English Grammar, an excellent work. D. Appleton, New York.

GRAMMAR.

Tower's Grammar Series; Smith's Productive.

HISTORY.

Parley's First Book, combined with Geography. Jenks, H. & Swan, Boston, 1852.

Parley's Universal History. Newman & Ivson, New York.

Willard's United States; Ingersoll's War of 1812; Marshall's Life of Washington; Parley's Greece and Rome; Russell's Greece and Rome; Goodrich's Pictorial England; and Willard's Charts.

BOTANY.

Theodore Thinker, First Lessons. Barnes & Co., New York.
Mrs. Lincoln. Huntington, Mason & Law, New York.

ALGEBRA.

Alsop's First Lessons. Biddle, Philadelphia.
Followed by Alsop's Algebra. Biddle, Philadelphia.
Davies' Algebra.

MENSURATION.

Vogde's. Biddle, Philadelphia.

SURVEYING.

Gummere's. Biddle, Philadelphia.

MATHEMATICS.

Davies' Practical Mathematics; Day & Thompson's Trigonometry. Newman, New York, 1848.

Davies' Calculus; Davies' Legendre's Geometry and Trigonometry, revised, 1853.

DRAWING.

Professor Shuster's. Newman & Ivson, New York, 1853.

NATURAL PHILOSOPHY AND ASTRONOMY.

Olmsted's Rudiments of Natural Philosophy and Astronomy; Comstock's Philosophy, revised edition, 1853. Ruth, W. & Co., New York.

McIntire's Astronomy and Globes; Lardner's Works.

ELOCUTION.

Caldwell's Manual. Philadelphia, 1845. (Excellent.)

PHYSIOLOGY.

Cutler's. (Let this be studied in all Grammar Schools.)

GEOLOGY.

Payes Clements'. Hitchcock's revised edition.

CHEMISTRY.

Mrs. Lincols Phelps', for Beginners; and Silliman's.

NATURAL HISTORY.

Goldsmith's.

CLASSICAL ANTIQUITIES.

Professor Fisk. Biddle, Philadelphia.

GREEK AND LATIN LANGUAGES.

Bullian, or McClintock's and Crooks'.

FRENCH, ITALIAN, SPANISH AND GERMAN.

At the discretion of the teachers. (Recent publications offer great improvements upon the past.)

Webster's Dictionary, unabridged, should be placed in every school.

[C.]

CONDENSED STATEMENT

Of the Situation and Progress of the Public Schools during the year commencing November 1, 1854, and ending October 31, 1855.

ALAMEDA COUNTY.—A. H. Myers, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between the ages of 4 and 15 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. 31st.	State Fund appropriated and not paid.	State and County Fund on hand, Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Lots, Fences, and Apparatus.	Building, rent and repair of School Houses.	Time of Teacher's Services. m's.	w's.	Salaries per Month	State Fund paid for Schools.	Salaries paid by Patrons of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855	1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	1854.	Number of Girls. 1855.	1854.	Pupils attending School. 1855.	1854.	Daily average attendance. 1855.	1854.	TEACHERS.	TRUSTEES.
Oakland Township..	Not given	71	52				$52 65	$52 65																							Martha Percy	F. S. Smith, J. A. Holmes, F. C. Coggeshall.
Oakland City	District No 1	162	153	11	$182 40	..	..	..	..	$416 68		$60 00	12		$150 00 / 80 00	$213 00		Not Rep'd	$273 30	$3,030 00		Primary	74	9	77	78	145	103	59	45	F. Warner, Sarah H. Walker	E. J. Willis, Superintend't, Artemus Davison, Clerk, City Board.
Clinton Township	" "	112			134 40	..	..	..	..	..	..	$500 00 / dona'd.	5						500 00				52		69		28		17		Joseph Sparrow	Asa Walker, Robert Parke, T. S. Smith.
Alameda Township.	Alameda	103	50		123 60	..	..	17 21		102 13		209 24	3		100 00	69 60	$89 00	$158 60	384 24				57	23	52	27	19	20	17	14	Mrs. A. S. Page	P. J. Stratton, James Mullington, E. B. Taft.
Eden Township	Eden Vale	115	92	2	138 00	..	..	31 67	$31 67	187 92	$19 50	506 15	9		100 00	128 82	300 04	428 82	986 14	480 00			63	50	52	42	44	20	16	14	C. A. Crane, James Sullivan	Z. Hughes, Wm. Mattox, R. S. Farrelly.
Murray Township	District No. 1	59			70 80								3		83 33				250 00				24		25		13		12		C. A. Crane	John Kottinger, Michael Murray.
Washington Town'p.	" No. 2	133	179		159 60		144 80	61 60	61 60	365 62		18 50	6		112 50	104 40	337 50	441 90	633 50	75 00			74		55		56		24		Charles Kempster	Noble Hamilton, Wm. Brier, Mr. Kelsey.
	7 Schools.	745	520	13	$808 80	$681 03	$197 45	$163 13	$93 27	$1,072 35	$19 50	$1,293 99			$625 83	$515 82	$726 50	$1,029 72	$3,086 28	$3,641 00	$4,618,364		380	10	376	127	221	14	182	73	9 Teachers.	

Note.—Nine Boards of Trustees organized, with good prospect.

AMADOR COUNTY.—H. A. Eichelberger, Sup't.

Township No. 1	1st District	126	91		$163 20	..	..	..	..	$185 87			9		$120 00	$283 00	1,055 04	$1,338 00	$1,738 00	$242 81		Primary	73	4	54	1	56	47	28		25	D. Parsons	Messrs. Hill, T. Jones, L. Bainbridge.
" No. 2	Ione Valley	102	108	7	195 60	..	..	..	..	220 60		$27 00	10		125 00	363 00	655 75	1,018 74	1,945 52	246 10			1	53	51	55	47	60	26		23	D. S. Peters	I. Hancock, T. B. Gregory, W. Wines.
	2d District	61			No Sch'l rep																											H. A. Swan, R. Sexton, I. M. Scott.	
" No. 3	1st District	241			292 80	..	..	..	..			592 80	3		100 00	300 00	561 00	1,073 00	1,935 26	480 00			126		118		80	43	70		28	J. Goodwin, Mrs Kain, Mr Gibson	I. M. Bullard, J. C. Williams, M. Rice.
			157							320 68			3		100 00	215 00								83		71							
	3d District	73			87 60								3		100 00	67 80	232 02	300 00	523 10				24		20		15		20		10	J. O. Peters	W. L. Pratt, L. Post, Wm. Rickey.
" No. 4	1st District	81			97 20	..	..	..	..			59 12	6		60 00	37 00	149 24	209 79	538 91				1		26		12		10			Mrs. Wildman	Messrs. E. McIntire Hubble, Wildman.
													7		80 00	113 55																	
" No. 5	"	105	33		126 00	..	..	..	..	67 40		13 50	3		90 00	135 00	135 00	240 00	253 50	623 98			51	18	54	15	22	33	15		15	I. M. Reynolds	B. Burt, E. L. Davis, L. H. Hinkleston.
" No. 6	"	65			75 60	..	..	..	..	53 04			8		80 00	295 75	295 75	595 40	648 44				2		51		56		14			D. Townsend	Col. Lagrave, W. A. Noyes, A. J. Reland
" No. 10			40							87 83										180 00				27		16		43		28			
	7 Schools.	865	432	7	$1,038 00	$509 88	$524 01	$612 69		$882 38		$968 90			$1,810 28	3,083 76	$4,864 92	$8,853 88	$12,282 89	$1,413 91			444	252	422	249	428	222	208	126	9 Teachers.		

BUTTE COUNTY.—J. J. Kleine, Sup't.

Bidwell	1st District	42	47		$50 40	..	County Tax assessed in County.	..	..	96 00		75 00	3		$100 00	$225 00	$75 00	$300 00	$300 00	..	..	Primary	21	29	21	14	15		14			Fryfhend Farrar	G. H. Crocette, W. L. Urton.
Eureka	Eureka	9			10 80	..		..	..				3		75 00		125 00	200 00	..	..			7				4		7			Almira Davison	W. Anderson, L. R. French, F. C. Thomas.
Ophir	1st District	135	95		188 10	..		..	..	194 04			4		100 00	90 00	210 00	300 00	300 00	..	..		90		67		22	13	17			H. W. T. Bliss	I. Bliss, A. P. Southworth, D. Thompson.
Oro	"	67	67		80 40	..		..	..	136 85			3		100 00	150 00	150 00	300 00	300 00	..	..		38	34	29	33	27	9	13		15	S. E. Hammond, S. E. Hodges	N. D. Plum, J. A. Watson, I. H. Sharp.
	4 Schools.	253	209		$330 00	$291 53	$670 94	$470 26		$426 89		$75 00			$465 00	$500 00	$1,025 00	$1,100 00	$870 00	$2,[illegible] ..			60	63	125	51	74	4	52	26	5 Teachers.		

CONDENSED STATEMENT—Continued.

CALAVERAS COUNTY.—A. H. Griggs, Sup't.

County and City, Township or School District	Name of School	Children between the ages of 4 and 18 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. 31st.	State Fund apportioned June 30th	State and County Fund paid, Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repair of School Houses.	Time of service of Teachers. m's. w's.	Salaries per Month	State Fund paid for Salaries.	Salaries paid by Trustees of the District.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	Teachers.	Trustees.	
Township No. 4	Campo Seco	42	67		$50 40	..	..	†	..	$136 85			3	$80	$78 78	$128 60	$207 38	$1,057 38	$375 00		Grammar	16	9	26	4	14	13	11	12	Charles N. Hinckley	I. Y. Dixon, N. T. Root, C. V. P. Ballard.	
" 5	San Andreas	78	29	11	93 60	..	..	..	..	59 23			3	100	34 10	200 00	234 10	234 10	728 63		"	42	6	36	8	26	19	21	10	D. B. Henry	I. G. Jordan, E. T. Lake.	
" 6	Mokelumne Hill	130	97		156 00	..	..	..	..	198 13			6	80	114 06	46 00	160 00	160 06	420 00		Primary	78	15	52	8	17	23	10	20	A. H. Griggs	I. W. Van Pelt, Fife Stout, T. S. Parker.	
" 7	Cave City	60		1	72 00	..	..	..	..		$15 00	241 72	7	75		260 00	260 00	506 72					36		24		18		9		J. C. W. Rheems	Wm. B. Butts, Wm. E. Bean, Isaac Frazier.
													2 2	70																E. F. Walker		
" 8	Angel's Camp	107	70		128 40	..	..	..	..	142 98		64 00	8	112	82 31	358 75	441 06	505 06	768 00		Unclass'd	67	12	40	10	29	22	26	12	T. L. Brickel	C. G. Lake, E. Stickles.	
														130																John Graves		
" 9	Franklin at Murphy's	110	62		132 00	..	..	..	..	126 64		314 40	6	84	72 91	364 00	436 91	751 31	300 00		Primary	62	23	48	13	32	23	18	14	Beman B. Roberts	A. H. Stephens, David Sheppard, Geo. Kline.	
	6 Schools.	527	325	12	$632 40	$383 58	* $239 22	Not Rept'd.	Not Rept'd.	$863 83	$15 00	$1,470 12			$731	$382 10	1,357 35	$1,739 51	$3,224 63	$2,591 63	$1,800,000		301	65	226	43	136	100	95	68	8 Teachers.	

* In Treasury Dec. 1, 1855. † Assessed about $925 in County.

COLUSI COUNTY.—R. Payne, Sup't.

Colusi Township	1st District	29			$34 80	None.				None.	$21 10	$13 00	3	$83 33		$250 00	$250 00	$284 10		$1,500,000	Primary	16		13		19		18		Miss E. Cooper	Dr. J. Compton, Wm. H. Turner, O. C. Berkey.

CONTRA COSTA COUNTY.—F. P. Vandemark, Sup't.

Martinez	Martinez	134	122	12	$160 80	..	..	..	..	$249 19			3	150		$875 00	$1,192 50	$1,269 50	$600 00		Unclass'd	68	64	66	58	27	22	20	8	Stillman Holmes	Geo. M. Jones, T. Brown, E. S. Lathrop.	
														125					and											L. L. Sandborn		
														100					899 00									46		30	Miss Fitzgerald	
Township No. 2	School No. 2	42			117 60	..	..	..	..		$20 00	$275 00	4	65		127 00	260 00	555 00			"	26		17		32		25		Philip Sage		
	" 3	23	110	5		..	..	..	..	224 68	25 00	110 00	3	50		67 64	150 00	285 00	790 78		"	9	54	14	56	19	56	12	32	Mrs. C. C. Allen	T. S. Burnett, Wm. T. Brown, S. J. True.	
	" 1	32				..	..	..	..		20 00		3	35		103 93	285 00	305 00			"	11		17		28		21		Wm. McNair		
" 5	" 1	20			105 60	..	..	..	..			24 00	3	60		90 00	180 00	213 00			"					23		18		Robert Derty		
	" 2	29	74			..	..	..	..	151 15	12 00	20 00	1	60		60 00	60 00	80 00	177 00		"	45	44	43	30	27	22	23	14	Wm. T. Harny	E. F. Hough, J. D. Taber, W. McNeill.	
	" 3	36				..	..	..	..			200 00	1 2	66		45 00	165 00	380 00			"					36		25		Thomas Ewing		
" 4	Alamo	127	125			..	..	..	..				8	95		492 80	760 01	804 66	850 00		"									I. C. Ewing	S. Russell, J. M. Moore, E. H. Cox.	
	Upper San Ramon					..	..	..	..	255 32			2 1	95		40 00	40 00	90 00			"	62	62	65	63	46	37	24	21	I. M. Reynolds		
" 6	School No. 1	40	49	3	48 00	..	..	..	..	100 63			3	30				90 00			"	20	20	20	29	14	7	11	6	Mrs. Clark	Messrs. McMasters, Henderson, Kimball.	
	9 Schools.	487	480	20	$432 00	$566 54	$832 76	$568 03		$980 43	$77 00	$629 00			$1,282 24	1,921 27	$3,092 51	$4,066 16	$3,316 78	$1,710,400		241	244	242	236	252	190	179	111	12 Teachers.		

ELDORADO COUNTY.—Dr. H. S. Herrick, Su'pt.

Coloma	Coloma No. 1	187	120	10	$224 40	..	..	..	*	$245 11		$150 00	3	$80	†	Not Reported by	Not Reported by	1,050 00	$90		Primary	96	64	91	56	66	60	54	37	Louisa Briggs	R. Chalmen, H. M. Miller, J. F. Shilds.	
	" 2												7	100		District.	District.													H. S. Herrick		
	" 3												3	80																Delilah Clapsdale		
Georgetown	Georgetown	174	112	2	208 80	..	..	..	..	228 77		73 50	7	120		"	$840	913 50	1,703		"	‖ 88	55	‖ 86	57	63	61	37	40	Thomas Wilson	D. Currie, W. T. Gibbs.	
Placerville	1st District	326	265	2	391 20	..	..	..	..	541 26		158 00	4	125		"	572	730 00	594		"	‖ 163	142	‖ 163	123	97	156	50	104	W. J. Bullock	A. W. Bee, A. Spiner, W. Apple.	
	24 "												5	125		"															Alexander Cooper	
Kelsey		57	57	6	68 40	..	..	..	..	116 42		29 90	3	75		$115	225	254 90	155		"	‖ 26	32	‖ 31	25	14	13	11	13	James Batterton	J. Galbraith, James Hamilton, Wm. Applebey.	
Mud Springs	Eldorado												3	60		120	180	180 00												Wealthy Merry		
	French Creek	219	219		262 80	..	..	..	..	447 32			3	70		260	210	210 00	1,620		"	‖ 110	100	‖ 109	119	74	52		31	Louisa J. Briggs	Hon. H. M. Fiske, Thomas Lambert.	
	Quakere												3	90		330	330	330 00												Geo. W. Critchfeill		
White Oak	Jay Hawks	75	90	2		..	..	..	..	183 83		20 00	2	50		55	55	75 00	329		"	‖ 38	43	‖ 37	47	Not g'n	22	Not g'n	13	Susan Doland	J. Peny, Wm. F. Dorman, Thos. Dandren.	
Cosumnes	1st District	112	112			..	..	..	..	228 77																			40		16	
Greenwood	"	87	48	1	104 40	..	..	..	..	98 04	$16 50	58 48	6	70		210	210	284 98	225		"	‖ 44	22	‖ 43	26	19	20	16	15	Isaac N. Loomer	Fred. Hartman, D. C. Dickinson, D. Walker.	
Diamond Springs	Diamond Springs											132 00	9	100		300	600	732 00												Helen E. Trask		
	Weberville	163	172		195 60	..	..	..	..	351 32		160 00	3	100		150	300	700 00	195		"	‖ 82	95	‖ 91	77	135	60	78	38	S. W. Daggett	M. K. Shearer, T. Rossington, C. Finkboner.	
	Spring Valley												3	80		120	240													M. A. Holmes		
	New Town												12	60		360	720	1,080 00												Mary A. Mullen		
	14 Schools.	1,400	1,195	23	$1,455 60	$1,410 45	$994 63	$495 83		$2,440 86	$16 50	$781 88			$3,187 51	3,391 ‡	‡	$6,578 51	$7,376 88	$4,911	$2,430,448		647	553	641	530	468	484	246	307	16 Teachers.	

* Paid over to new Treasurer. † Not designated in what manner. ‡ Reported. § Estimated. ‖ Not reported by Superintendent or Trustees.

CONDENSED STATEMENT — CONTINUED.

HUMBOLDT COUNTY.—A. J. HUESTIS, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between the ages of 4 and 18 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. 31st.	State Fund apportioned June 30th.	State and County Fund on hand, Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repair of School Houses.	Time of service of Teachers. m's. w's.	Salaries per Month	State Fund paid for Salaries.	Salaries paid by County of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	TEACHERS.	TRUSTEES.
Union Township	1st District	78	79		$93 60	..	..	$220 39		$161 36		$91 90	3	$100	$100 00	$179 00	$279	$739 90	$900 00		Unclas'd	38	25	49	17	56	42	56	25	H. F. Landsdale..	A. Jacoby, A. H. Murdoch, H. S. Daniels.
	2d "												6	100	219 00	150 00	369													Mrs. A. E. Roberts	
Bucksport	1st "	71	62		85 20	..	..	..	..	126 64		55 90	6	100	182 54	342 46	525	581 90	1,650 00		"	37	9	34	6	16	15	16	12	Rev. E. Vad	W. Roberts, E. H. Howard, S. C. Hopkins.
Eureka	Private School	37	45			..	..	..	..	91 91							175	175 00	1,982 92		"	21	14	16	12		26		20		J. T. Ryan, J. M. Eddy, J. Debaveb.
	4 Schools.	186	186		$178 80	$219 63	$598 63	$220 39		$379 91		$148 80			$501 54	$671 46	$1,348	$1,496 80	$4,532 92	$826,119		96	48	90	35	72	83	72	57	4 Teachers.	

LOS ANGELES COUNTY.—J. F. BURNS, Sup't.

Los Angeles City	1st District	825	753	*40	$985 20		$903 26	$565 72		$1,538 05		$8,000 00	3	$125				1,462 50			Grammar	405	378	416	375	109		30		Wm. McGhee	J. O. Wheeler, J. G. Nichols, I. Hartman.	
	2d "												3	100							Primary					87		63		Louisa Hays		
													9	125												69		31			A. H. Hoyt	
Elmonte	1st and 2d Districts	305	271	11	366 00		14 65			553 54		49 75	8	80	$465	$461		1,309 75			"	167	161	138	110	111	78	62	30	J. G. Johnson		
													4 2	80	116																E. B. Barker	
													3	60	90																Miss Maddux	
San Gabriel	1st District	203	167	4	243 60		533 01			341 00		181 06	3 2	100	605	305		1,091 00			"	112	87	91	89	89	41	16	33	J. F. Burns	I. S. Mallard, W. M. Stockton, J. Young.	
													6	100															17		C. C. Twichell	
San Juan Capistrano	"	193		*6	231 60		76 25			312 00			3	100							"	108		85		27		18		Thomas J. Scully	M. Garcia, Juan Abile, John Foster.	
Santa Anna	"						† 104 27																								B. Yorber, M. Fales, A. Montelarge.	
San Jose																															I. Palemoris, B. Meyer, S. Martinez.	
	5 Schools.	1,522	1,191	61	$1,826 40	$1,405 72	$1,631 44	$669 99	‡ $763 93	$2,432 70		$8,230 75			$1,276	$766	$2,042	$13,175 25	$8,071 09	$2,567,859		792	626	730	574	389	296	165	126	9 Teachers.		

* Not Official. † Not Apportioned. ‡ By new Treasurer, State and County.

MARIPOSA COUNTY.—E. J. SAGENDORFF, Sup't.

Township No. 2	Quartzburg	107	64		$128 40					$130 72		$70 00	6	$132	$123 50	*	$160 00	$230 60	$1,198		Primary	50	28	48	36	33	27	15	21	W. C. Dodge	J. G. Jones, J. R. Givin, L. M. Owen.	
" 3	Mariposa	127	57	18	152 40			†		116 42		470 80	2	123	123 50	$150	373 50	$41 80	1,198		"	77	34	50	29	39	29	15	21	D. A. Flecker	S. Davenport, C. Steiger, H. B. Cannon.	
													3	100																	E. J. Sagendorff	
" 1	Millerton																															
" 3	Shirlock's																															
" 2	Princeton																															
	2 Schools.	224	121	18	$280 80	$142 81	*	*	*	$247 14		$540 80			$247 00	$150	$533 50	$864 80	$2,396	$1,703,000		136	62	98	61	72	54	30	42	3 Teachers.		

NOTE.—No report from County Treasurer. * None Reported. † Assessed Five Cents on One Hundred Dollars.

MARIN COUNTY.—W. DUTTON, Sup't.

		270	155																			112	96	98	53					No School Reported.	

CONDENSED STATEMENT—Continued.

MONTEREY COUNTY.—S. Carrol, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children, between the ages of 4 and 15 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. Stat.	State Fund apportioned June 5th	State and County Fund on hand, Dec. 5th.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repairs of School Houses.	Time of service of Teacher. m's. w's.	Salaries per Month.	State Fund paid for Salaries.	Salaries paid by Patrons of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	1854.	Number of Girls. 1855.	1854.	Pupils attending School. 1855.	1854.	Daily average attendance. 1855.	1854.	TEACHERS.	TRUSTEES.
San Juan	School No. 1	230	232		$376 00		$104 70	$252 92		$473 87		$250 56	4 1 1 / 3	$75 / 65	$342 31		$692 31	$2,208 04	$1,624 00		Primary	136	180	94	152	63	69	30	38	A. Martin; J. H. Martin; R. D. Mitchel	J. Breen, R. B. Harris, J. Woolban.
" 2																															
Pajaro	" 1	160		13	192 00							248 00	3	50		$150	150	398 00			"	†80		†80		24		14		A. Ollinger	J. Rowlhouse, J. M. Baldwin, T. F. Shields.
Alisal	" 1	184			220 80								3	50							"	†92		†92		20		10		James Webb, M. D.	J. B. Hill, T. Y. Logwood, T. S. Johnson.
Monterey	" 1	419	396		502 80		408 68	430 20		906 81		271 64	3 6 9 /	90 75 90 /	1,410 00		1,657 50	1,929 14	1,922 03		"	213	211	206	184	114	99	40	38	G. D. Hanson; Jane A. Little; James T. Gardner.	J. Abrego, H. G. Blankman, J. B. R. Cooper.
	7 Schools.	993	627	13	$1,191 60	$740 04	$513 38	* $683 12		$1,280 68		$770 20			$1,752 31	$150	$2,459 81	$4,535 16	$3,546 03	$1,763,787		521	391	476	336	231	159	94	76	8 Teachers.	

* Collected prior to Nov. 1, 1855, and not yet apportioned, $775 93. † Not Official.

NAPA COUNTY.—W. E. Taylor, Sup't.

Hot Springs	Hot Springs	174	61		208 80	..	..	..	..	104 17		$55 00	3 4 3 /	$60 00 110 00 60 00 /	$83 96	$326 59	$410 55	$465 55	$214 75		Primary	*87	34	*87	17	64	51	38	34	S. W. Jewell; J. V. Porter; W. H. Pendleton.	Messrs. Kellogg and Gwsley.
Yount Township	School No. 1	42			63 60	..	..	..	..				3	50 00												26		18		W. W. Boone	
	" 2	11	113			..	..	..	..	230 81			3	80 00							"	21	62	32	61	24				W. D. Dearing	Messrs. McCorelo, Rector, Crowly.
	" 3					..	..	..	..																						
Napa	Napa City	211	186		263 20	..	..	..	..	377 87		578 50	3	103 40	200 00	110 21	310 20	888 70	364 00		"	*100	92	*111	93	34	56	22	37	Anna A. Jefferson	J. Hamilton, R. Wost, H. Jacks.
	Suscol, No. 2	39			46 80	..	..	..	..			75 00	9	50 00		300 00	300 00	375 00		1,404,986	"	*20		*19		21		10		F. M. Swartwood	J. Hill, David Rees.
	6 Schools.	477	349		$572 40	$411 92	$1,240 70	$710 16		$712 85		$708 50			$283 96	$736 80	$1,020 75	$1,729 25	$578 75	$1,404,986		228	178	249	171	159	107	88	71	7 Teachers.	

* Not Official.

NEVADA COUNTY.—T. W. Colburn, Sup't.

Nevada City	School No. 1	267	205		$320 40	..	..	..	..	$418 72			12	$100 125	$335 00		$335 00	$335 00	$2,966 77		Primary	143	101	124	104	80	95	80	62	Messrs. Mather; Hutchins	J. H. Warren, C. A. Tweed, J. Van Hagan.
Rough and Ready	Bunker Hill	135				..	..	..	..		105	$232 50	12	100	319 80	$370	518 82	1,226 82			Grammar	58		77		60		37		Abel Dobson	
	School No. 2	*	137		198 00	..	..	..	..	279 83									40 00				29		23		52		62		J. Corban, George Flint, L. A. Crabtree.
	Pleasant Valley	30				..	..	..	..				3									14		16		17		12		I. S. Wood	
Bridgeport	Cherokee	88	63	6	165 60	..	..	..	..			700 00	12	166		600	600 00	1,300 00			Primary	44		44		22		16		A. S. Furnell	J. B. Johnson, M. W. Martin, W. Vandoren.
Grass Valley	Grass Valley	240	150		288 00	..	..	..	..	306 39			11	125 150	306 39	650	956 39	956 39	567 50		"	120	79	120	71	17	58	25	65	S. R. Stevens; R. A. Ricker	Rev. John B. Hill, E. A. Tompkins, M. D., J. W. Fouse.
	6 Schools.	760	555	6	$912 00	$655 06	‡			$1,004 94	$105	$932 50			$961 19	1,620	$2,410 21	$3,817 71	$3,474 27	‡$1,619,885		379	209	381	198	196	285	165	169	7 Teachers.	

* No Report. † No Report from Treasurer. ‡ Report for 1854.

PLUMAS COUNTY.—J. N. Hartzell, Sup't.

Elizabethtown	Elizabethtown	75			$90	$51 93			None.	None.			3	$100		$248 07	$300 00	$300 00			Primary	45		30		29		16		Wm. K. Logan	E. T. Hogan, John Howard, J. K. Mathews.
Mineral	No Report	18							"	"												11		7							P. Chamberlain, Wm. M. Story, A. S. Culp.
	1 School.	93																				56		37		29		16		1 Teacher.	

CONDENSED STATEMENT—Continued.

PLACER COUNTY.—H. E. Force, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between the ages of 4 and 18 years.	Children reported previous year.	Orphans.	State Fund apportioned this date.	State Fund apportioned previous date.	State and County Fund on hand, Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repair of School Houses.	Time of service of Teachers. m's.	w's.	Salaries per Month	State Fund paid for Salaries.	Salaries paid by Patrons of the Schools	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	1854.	Number of Girls. 1855.	1854.	Pupils attending School. 1855.	1854.	Daily average attendance. 1855.	1854.	TEACHERS.	TRUSTEES.
Township 6	Michigan	55	43		$66 00	..	..	..	..	..	..		3		$150		$135	$135 00				Primary	*23		*27			25		15	P. Singer	H. T. Buckley, D. Johnson, John Cummings.
" 4	Dutch Flat	56		19	67 20	..	..	..	..	..	..	$191	2	2	100		40	166 00	357 00			"	25		31		19		6		Wm. Strout	T. J. Bonk, C. Dornant.
													3	2	36		126									6		6		Mrs. Stratton		
Gold Hill	Gold Hill	50	81	4	60 00		$96 17	$178 87		$165 45		14	3		125	$262 98	105	625 00	630 00	$880			25	18	25	22	36	40	15	17	J. B. Henderson	J. L. Finley, D. V. Mason.
Auburn	Auburn		68				134 94			138 89		98				220 79		257 73	355 73					39		29		26		12	No Report	
Ophir	Ophir		29				107 60	87 32		63 32						88 10		123 18	123 18	695		"		19		12		31		18	"	
Iowa Hill	Iowa Hill		79				186 62	155 94		161 36						163 63		225 80	225 80	400		"		12		8		20		15	"	
	3 Schools.	161	300	23	$193 20	$354 09	$389 79	$557 07		$529 02		$303				$735 50	$406	$1,532 71	$1,834 71	$1,975	*1,551,757		78	88	83	71	80	117	42	62	4 Teachers.	

Note.—The illness of Mr. Force deprived him of the power to report as he wished. This is made out from Trustees' and Treasurer's Reports. * Report of 1854.

SACRAMENTO COUNTY.—Dr. F. W. Hatch, Jr., Sup't.

	1st Ward Grammar					..	..	..	..	..	..	..	12	$120			..					Grammar			50		50	63	45	56	Miss Anderson	
	" Primary					..	..	..	..	..	..	..	12	120			..					Primary	31		47		73	62	55	40	Miss S. Frost	
	2d Ward Grammar					..	..	..	..	..	..	..	12	150			..					Grammar	44				44	77	36	58	R. Jackson, Misses Chamberlain, Everett, (formerly Mrs. Ross, Miss Pratt)	
	" Primary					..	..	..	..	..	..	..	6	120			..					Primary	52		23		75	83	70	40	Mr. Howe	F. Tukey, Sup't of Board of Education.
City of Sacramento	3d W Grammar, No 1	1263	1,293		$1,615 60	..	..	..	$1,776 87	$2,641 03		$8,763 73	6	150		4,167 13	..	$12,957 92	$21,721 65	$3,409 45		Grammar	52	†636		657	52	81	47	51	Miss C. Pratt, (formerly Mrs. Ely)	Dr. J. F. Morse, H. Houghton, Dr. F. W. Hatch, Geo. Wiggins, R. P. Johnson.
	" " No. 2					..	..	..	..	..	..	..	6	120			..					"			56		56	93	48	46	J. W. Wells, (formerly Mrs. Jackson)	One vacancy.
	" " No. 3					..	..	..	..	..	..	..	12	150			..					"	45		20		65		47		Miss Annie Roberts	
	" Primary, No 1					..	..	..	..	..	..	..	12	120			..					Primary	58		29		87		70		Mrs. E. A. Wright	
	" " No. 2					..	..	..	..	..	..	..	12	120			..					"	27		33		60		50			
						..	..	..	..	..	..	..					..						†348		†348							
Sacramento Township	No School	33				..	..	..	..	..	..	..					..						†16		†17							
American "	Grove	82	64		98 40	..	..	..	194 19		$21		7	125		75 54	$184 45	269 73	390 73			Grammar	†40	35	†42	29	30		27		C. A. Hill	Benj. Orrick, Whaley, Grayham.
Sutter "	Union	98	111	3	117 60	..	..	..	245 02	226 73	65	91 17	6	100		357 74	348 09	471 75	627 92	210 00		Mixed	†49	61	†49	50	40	19	23	10	Mr. Rodgers	S. W. Hastings, Jeff. Lake. — Latkin.
Prairie "	Number 11	51	76	12	61 20	..	..	..	108 57	155 24			9	100		244 21		352 81	352 81	996 75		"	†25	42	†22	34	24	38	18	24	P. C. Millette	M. S. Turner, C. J. Defendoff, N. B. Lane.
Dry Creek "	DryCreek Dist. School	65	49	6	78 00	..	..	..	34 99	100 00		34 99	7	65		157 92	262 17	192 91	227 90	1,307 75		"	†30	26	†35	23	30	28	11	19	Sylvester Degan	N. Slater, S. C. Fogitt, J. M McIntyre.
San Joaquin Dist. 1	Not stated	65	36	12	78 00	..	..	..	..	..	..	270 00	9	50		528 54		167 39	437 39	513 75		"	†30	25	†35	11	38	22	12½	9	Martin Hagan	J. P. Rhoads. T. Allison, H. Taylor.
" " 2	" "	21	53			..	..	..	238 19	334 98			1	2				246 53	246 53	955 80		"	†15	29	†16	24	12	26	9½	16	R. D. Wilson	J. T. Beam, Augustus Frayton G. M. Martin.
" " 3	Buckner	46	75		55 20	..	..	..	..	..	..	317 89	6	2 60 to 88			26 80	363 20	681 09	655 00		"	†20	44	†26	31	27	16	20		T. R. Wilson	Dr. Powell, Dr. Strong, Washington Coons.
Mississippi Township	No School	45	39			..	..	..	..	..	..	..											†22	18	†23	21						J. Meredith, E. P. Willard, H. D. Rowley.
Brighton "	Oak Grove	60				..	..	..	102 00			400 00	3	85				$490 00				"	†30		†30		20		18		J. P. Martin	J. Beam, A. D. Patterson, Mandilove.
" "	Brighton School	60			144 00	..	..	..					6	100				600 00				"	†30		†30		24		18		J. D. Wilson	
Cosumnes "	No School	186	172			..	..	..	102 64	351 32		178 00				351 32		417 96	595 96	1,025 00		"	†93	98	†93	74		25		20	No School	C. H. West, W. J. Stoddard, J. C. Merrifield.
Natoma "	" "	13				..	..	..															†16		†17						" "	A. Higbee, J. N. Dennison, C. Nichols.
Centre "	" "	39	22			..	..	..															†18	11	†21	11					" "	Messrs. Medley, Carter, Wilson.
Georgiana "	" "					..	..	..																							" "	C. S. Howell, S. C. Taylor, W. B. Foster.
	18 Schools	2,137	1,999	33	$2,148 60	$2,348 76	$971 45	$2,446 12	$2,862 47	$3,809 39	$86	$10,055 78				$5,882 43	$721 51	$16,040 20	$26,181 98	$14,083 50	$9,297,634		1,081	1,025	1,062	965	782	627	624	377	18 Teachers	

* Not divided in Report of Treasurer. † Probable Number.

CONDENSED STATEMENT—Continued.

SAN BERNARDINO COUNTY.—H. A. Skinner, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between 5 and 15 years.	Children reported previously.	Orphans.	State Fund apportioned Dec. 31st.	State Fund apportioned June 30th.	State and County Fund apportioned Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building rent and repair of School Houses.	Time of actual service. m's.	w's.	Salaries per Month	State Fund paid for Salaries.	Salaries paid by Parents of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	TEACHERS.	TRUSTEES.
San Bernardino 1st District	City No. 1	152											11		$81 80	$317 85	$317 85	$635 70	$635 70	$234 70		Primary	70		82		152		137		Ellen S. Pratt	G. H. Rollins, D. Stark, W. E. Dodge.
	City Union No. 2	169	202		$350 40			$84 78		$506 43		$58 12	6		78 00	234 50	234 50	469 00	527 12			Second'y	92		77		169		91		Messrs. Lee, Norris.	
	" 3	174											6		74 16	222 50	222 50	445 00	445 00	1,120 00		"	91		83		174		94		A. St. Clair, Mr. Lee.	
	School No. 4	40											4		40 00	80 00	80 00	160 00	160 00			"			40		40		22		Francis Clark	
San Bernardino T w'p	District 2 West	53	80		96 00					163 40			4		70 18	140 37	140 37	280 74	280 74	680 00		"	31		22		53		40		J. P. Lee	I. Goodwin, F. Garner, G. Garner.
24 District		36											3		50 00	75 00	75 00	150 00	150 00			"	17		11		36		28		R. Barras	
3d "	Mission	30	30		36 00					61 23			3		50 00	75 00	75 00	150 00	150 00	270 00		Primary	16		14		27		21		Alley Borren	W. Wilson, H. Bibybee, H. Van Louven.
4th "	Mill School. (Not yet organized.)	26																														G. W. Sirrine, O. H. Carter, G. Bickmore.
5th "	Warm Spring	42																														G. Dart, F. Beer, F. Twitchell.
6th "	San Gorgonia	36	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	J. Brown, D. G. Weaver, J. W. Smith.
7th "	San Salvador	80																														L. Robadose, D. L. Galegas, N. H. Simpson.
San Salvador Town'p																																
	7 Schools.	838	402		$482 40	$174 47	$177 02	$84 78		$821 11		$58 12			$450 14	$1,145 22	1,145 24	$2,290 44	$2,348 56	$2,304 70	312,178 19		317	209	329	202	651	243	433	162	9 Teachers.	

SAN DIEGO COUNTY.—Frank Ames, Sup't.

San Diego City	School No. 1	117		6	$149 40	$116 85				$262 21		$75 00	5		$40 00			$200 00	$275 00	$162 60		Primary.	59	51	58	48	38	30		25	Fanny Stevens	E. W. Morse, J. W. Robinson, H. C. Ladd.

Note.—Report from Trustees, but no Report from County Superintendent or Treasurer.

SAN LUIS OBISPO COUNTY.—John Wilson, Sup't.

San Luis Obispo	San Luis Obispo	332			$398 40		$638 30	$122 85			$12 00	$20 00	3		$75 00		$225 00	$225 00	$257 00	$1,035 00	$379,588		166		166		19	28	10	21	Dr. H. Ogburn	W. J. Graves, W. E. Borland, E. Romie.

SAN JOAQUIN COUNTY.—Dr. Wm. G. Canders, Sup't.

Emory Township	School No. 1	98			$349 20	..	..	..	..	$120 51		$120 00	12		$100 00	$250 00	$600 00	$850 00	$970 00	$2,150 00		Unclas'd	51	50	47	23	19	12	9	9	C. B. Smith		
	Greenwood	193	50			..	..	..	..				8		100 00																	H. Y. Miller	T. M. McLean, W. E. Stewart, J. S. Lewis.
	Southern					..	..	..	..			500 00	4		100 00			200 00	200 00	1,000 00		"					103		55		G. S. Yerli		
	Western												4	2	75 00															T. J. Ally			
Elkhorn	Henderson	148	122		177 60	..	..	..	..	249 19		315 00	3		70 00		60 00	60 00	1,217 00	260 00		"	†75	70	†76	52	17	26	12	12	T. J. Sullivan	J. Wilkinson, J. Woods, T. Henderson.	
	Woods											325 00	9		90 00		270 00	270 00				"					36		18		C. J. Newton		
Douglass	West End														80 00							"					23		19		A. J. Randall		
	Garda	127	103		152 40	..	..	..	..	210 39		200 00			70 00	340 00	105 00	445 00	820 00	1,051 25		"	†64	73	†63	30	13	32	16	20	Thos. Kenyon	J. Flood, P. Kenyon, J. Gard.	
	Kenyon														80 00							"					36		22		Thos. Norris		
Elliott	Holman	72	73		86 40	..	..	..	..	149 11			3		100 00															A. A. Wheelock			
	Atherton											425 00	1	2	80 00		274 62	274 62	699 62	1,330 00		"	†36	24	†36	23	53	47	12	28	M. Peachy	S. Doake, D. J. Locke, S. A. Atherton.	
													3		75 00															S. Atherton			
City of Stockton	School No. 1												5		125 00							Grammar			41		41		25		Mrs. M. Saxton		
	" No. 2	329	317		394 80	..	..	..	..	647 49	110 53	2,992 52	12		125 00							"	71				71		34	172	Dr. Wm. G. Canders.	Board of Education: Dr. J. Ward Ellis, V.	
	" No. 3												9		125 00	647 49	5,440 00	6,087 41	8,562 00	8,972 33		Primary		152	111	165	111	232	38		Miss H. F. Thomas	M. Peyton, Dr. J. Shurtliff.	
	" No. 4												12		125 00							"	100				109		47		L. S. Van Allen		
O'Neil	Greenwood		201			..	..	..	..	410 56	..	..					..	..	..	..	..	..	..	..	115		86		55		§		
Castoria	French Camp												3		75 00															F. G. Woodward			
														3	75 00															C. C. Terrill			
													3		50 00		423 93		951 84	1,423 46			†76	70	†66	48		41		16	E. Kennedy	Capt. E. W. Atwood, J. R. McCloud.	
		142	118	2	170 40	..	..	..	..	241 02	..	..	3		75 00															S. Myers			
													2		20 00															Mr Elkins			
	Turners												2		50 00		105 34										18		14		Mr. Hanscomb		
	17 Schools	1,109	903	2	$1,330 80	$1,172 03*	$2,015 32	$2,430 68		$2,028 27	110 53	$4,877 52				$3,073 29	7,478 89	$8,887 11	$15,120 46	$16,236 11	‡4,000,000		480	500	429	427	691	437	345	312	21 Teachers		

* County, $1,888 81; State, $127 01. † From amount paid salaries, supposed to exceed three months. ‡ Not Official. § No Report from this School unless included in Douglass or Emory Townships.

CONDENSED STATEMENT—Continued.

SAN FRANCISCO COUNTY.—J. C. Pelton, Sup't.

County and City, Township or School District.	Name of School.	Children between 4 and 17 years of Age.	Children reported previous year.	Orphans.	State Fund apportioned this fiscal.	State Fund apportioned last fiscal.	State and County Fund on hand Oct. 81d.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building rent and repair of School Houses.	Time of Session in months.	Salaries per Month.	State Fund paid for Salaries.	Salaries paid by Parents of the School.	Total paid Salaries.	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	Teachers.	Trustees.
San Francisco City..	District No. 1.....	683	280		..	..	..	..	..	† ..		..		200 00 125 00 110 00 110 00 100 00 100 00 25 00	..	‡	..	..	..	..			178		159	246	337	100	337	J. Swett, Principal. Miss Hazleton, As't. " E. Risdon, " " R. Foster, " " Longfellow, " " A. M. Shew, " " A. Kemball, "	
..	District No. 2.....	1140	1,149		..	..	..	..	..	..		..		200 00 125 00 110 00 100 00 100 00 100 00 100 00 50 00	..		..	..	..	..			390		288	684	678	321½	257½	Jas. Denman, Pr'l. Miss Sanford, As't. " E. Pomroy, " Mrs. Williams, " " L. Clapp, " " M. Dean, " Miss Kitteridge, " " A. Kennedy, " " C. E. Smith, "	
..	District No. 3.....	837	1,057		..	..	..	..	..	..		..		200 00 125 00 110 00 110 00 100 00 100 00 100 00 100 00	..		..	...	..	..			381		287	635	671	283	200	E. H. Holmes, Pr'l. Miss A. Park, A'st. " H. Hancke, " Mrs. E. Burt, " Miss E. Shaw, " " Fitzgerald, " " S. Haynes, "	City Board of Education—H. P. Corser, J. P. Buckley, Wm. Sherman, John Benson, R. H. Tibbetts, F. C. Ewer, H. P. Janes, E. Cook.
..	District No. 4.....	794	403		..	..	..	..	..	..		..		200 00 125 00 100 00 100 00 100 00 100 00	..		..	..	..	..			295		330	733	625	289	195	A. Holmes, Prince'l. Miss Barlow, Ass't. " S. M. Reid, " Mrs. A. Austin, " Miss Crawford, " " M. Lutton, "	
..	District No. 5.....	658	642		..	..	..	..	..	..		..		200 00 125 00 100 00 100 00	..		..	..	..	..			262		225	373	225	131	136	H. P. Carlton, Pr'l. Miss Austin, Ass't. " M. Merrill, " Mrs. J. Nevins, "	
..	District No. 6.....	160	130		..	..	..	..	..	..		..		200 00 100 00 100 00	..		..	..	..	..			99		31	200		82	51	J. C. Morrill, Pr'l. Mrs. Cudworth, A't.	
..	District No. 7.....	257	141		$5,437 20	..	..	..	..	..		..		150 00 115 00	..		..	..	..	..			52		60	142	112	48	35	Alex'r Macy, Pr'l. Miss Holbridge, A't.	
..	2d Ward.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		554		339	332	Thos. C. Leonard...		
..	6th Ward.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	983		901	245	601			Miss C. P. White. Wm. Hammill...	
..	7th Ward.....																					781		697	612	706		569	John Maginnis... Frances McInnis.		
San Francisco County	District No. 1.....		56		..	..	..	..	..	..		..	4 3	75 00 75 00		$300 00	$300 00	$300 00	..	..			10		7	13	17	6	17	L. G. Simmons... Curtis Read.....	A. M. Hicks, A. A. Green, S. P. Hunter.
..	" No. 3....	499	59		..	..	..	..	..	..		..	2	75 00		375 00	375 00	375 00	..	..			17		13	34	37	24	24	P. N. Fitzgerald...	
..	" No. 3....		50		490 80	..	..	..	..	..		..	1 2									230	17	179	13	13	30	9	20	Sarah C. Knox.....	John Green, John McLeod, Eli Whipple.
..	" No. 3....												3													10		6		T. E. Landry.....	
			*170		..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	2,262		2,209							
	16 Schools.....	4 940	4,115	200	$5,928 00	$1,856 90	$193 34	$9,369 14		$7,040 70		$38,847 56			$12,163 96	$56 695 18	$643 54	136,580 00	160,342 62	832,070,672		2,492	¶1,704	2,448	¶1,413	4,694	¶2,892	1,638	¶1,272		

* Error in Report of 1854. † City, $6,708 68; Township, $337 02. ‡ City Taxes, $56,029 18. § Mixed, Primary, Intermediate and Grammar. ‖ Report of City Authorities in 1854. ¶ Estimated by County Sup't.

CONDENSED STATEMENT—Continued.

SAN FRANCISCO COUNTY TREASURER'S REPORT, RECEIVED AFTER APPORTIONMENT.

Balance of Cash on hand to credit of School Fund, November 1, 1854	$1,303 41
Taxes collected in said County on account of School Fund, from November 1, 1854, to October 31, 1855	9,266 44
From City of San Francisco, same term	23,289 82
Received from State Treasurer	12,357 30
	$45,207 97
Total amount paid out	46,014 67
Balance on hand to Credit of County School Fund	$193 30

San Francisco, October 31, 1855.

Amount paid Teachers' Salaries and Rent of School Houses in the 2d Ward	$15,168 50
" " " " " " " " 7th Ward	2,200 00
" " Clerk of Board of School Commissioners	700 00
" " for Repairs of School Houses	2,518 75
" " " Coal and Wood for County Schools	94 00
" " Stoves	193 00
" " " Books and Stationery in the 7th Ward	600 00
" " " " " 2d Ward	175 00
" " " Rent of School Houses in 2d Ward	1,200 00
" " " Stationery for County Schools	1,575 00
" " " Books for the 5th Township	153 70
" " " Chalk for County Schools	100 00
" " " City of San Francisco, State and County Money	12,192 84
" " W. R. Gorham, as Commissions	440 29
" " Geo. W. Green, (late County Treasurer,) as Commissions	1,703 59
	$46,014 67

SANTA CLARA COUNTY.—Freeman Gates, Sup't.

County and City, Township or School District.	Name of School.	Children between the ages of 4 and 18 years.	Children reported previous year.	Orphans.	State Fund appor. Board Dec. 31st.	State Fund appor. Board June 30th.	State and County Fund on hand, Oct. 31st.	County Fund received.	County Fund paid out.	State Fund appor. for the present year.	Paid for School Lots, Rent and Apparatus.	Building, rent and repair of School Houses.	Time of service of Teachers. m's. w's.	Salaries per Month.	State Fund paid for Salaries.	Salaries paid by Trustees of the School.	Total paid Salaries.	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	TEACHERS.	TRUSTEES.	
San José Dist. No. 1.	School No. 1	417			$500 40			$910 72	$910 72	$1,382 81	$50 00	$145 00	13	†300 00	2,122 42	$25 00	$2,838 14	$3,003 14	$1,087 50			Primary	290	281	217	292	127		60	33½	Freeman Gates	Joseph Aram, C. H. Kendall, Simon Cutler.
" " No. 2.	" No. 2												11	150 00								‡					88	78	32	25	Wesley Towner	
District No. 2	" No. 2	140	677										2	50 00		35 00	60 00					"									O. H. Vewman	W. H. Freer, J. Ogan, Capt. Peck.
					168 00								1 2	60 00								"	70		70		25	30		77	Stillman Willis	
" No. 3	" No. 4	60			72 00								3	80 00								"	30		30		19	31	15		Lansing O. Swart	Messrs. Hamilton, Caldwell, Roberts.
Santa Clara District	" No. 1	329	329		394 80			442 67	442 57				8 2	125 00	1,303 59		1,732 91	1,732 91	1,400 00			"	160	175	169	152	83	45	29	29½	S. T. Jackaberry	" Montgomery, Braly, Stock.
" Dist. No. 2	" No. 2	124	124		148 80			166 80	166 80				6	100 00	253 28		420 08	420 08	1,325 00			"	62	72	62	52	79	56		30	J. C. Bland	" Baily, Dale, Jackson.
" " No. 3	" No. 3	52	52		62 40			69 95	69 95	1,127 49		34 97	5	100 00	106 22		141 20	176 17	1,000 00			"	25	25	27	27	27	28		12½	A. J. Swart	
" No. 4	" No. 4	38	47		45 60		$23 00	63 23	63 00				6	100 00	96 00	300 00	600 00	600 00	550 00			"	26	17	12	20	38	46	19	19	D. W. Harrington	
Fremont Dist. No. 1	" No. 1	40	66	4	48 00		31 00	102 26	102 25				5	80 00	156 35	100 00	356 66	400 00	240 00			"	24	37	16	26	33	29	18	12½	Wesley Gallimore	
" " No. 2	" No. 2	71	} 159	6			18 32	102 97	83 65				1 2	80 00	156 35		240 00	240 00	720 00			"	40	} 77	31	} 82	26	} 68	16	26½	J. H. Overstreet	D. W. Dickey, R. W. Canfield, W. W. McCoy.
" No. 4	" No. 4	69		4			13 59	53 65	39 46	459 58		25 00	1	80 00	80 54	30 00	150 00	175 00				"	46		23		30			22½	J. Boykin	
" No. 5							*95 40	*43 69	*43 69					*229 37			273 06	273 06										14		10		
Gilroy Dist. No 1	" No. 1	196	163		235 20			219 27	219 27	332 94			3	80 00	519 46		582 01	582 01	1,014 50			"	98	90	98	73	46	29	13	29	D. W. Harrington	
" No 2	" No. 2												2 1	70 00		129 00	286 00	286 00									24	36	13	36	Y. Vanschaick	
Alviso Dist. No 1	" No. 1	88			105 60							125 00	4 2	50 00			225 00	225 00	350 00			"	48		40		26		19		Julia Pomeroy	W. Morgan, D. Butler, J. Evans.
Redwood Dist. No. 1	" No. 1	127			152 40								10	100 00			491 00	866 00	1,357 00	5,443,780		"	60		67		44		16		A. T. Swart	F. H. Shepherd, H. Jarboe, L. Miller.
	15 Schools	1,751	1,617	14	$1,933 20	$1,908 52	$128 85	$2,175 21	$2,141 76	$3,302 82	$50 00	$329 97			5,023 98	1,345 00	$8,703 49	$9,791 37	$9,037 00	$5,443,780			§889	830	§712	606	736	467	255	303	15 Teachers	

* Report of County Treasurer. † With two Assistants. ‡ Primary, Grammar and High. § Probable Number.

SANTA BARBARA COUNTY.—Geo. D. Fisher, Sup't.

Township No. 1	San Buenaventura	130		..	..	..	..	..	..	$46 12	$30 00	12	$60 00	$300 60		$660 00	$1,096 12			Primary	31	10	18		49				John Royal	Henry Carnes, A. Columber, Ramando Olivas.	
" 2	Santa Barbara	462		..	..	..	..	..	..		289 75	7	100 00	1,100 00		1,100 00	1,489 75			"	87		14		101				Pablo Caracela	Ch. E. Huse, Daniel Hill, Anto. de la Palma	
												5	100 00																John Healy	y Mesa.	
" 3	Santa Ines	100		..	..	..	..	..	..											"										Geo. Campbell	A. Hartnell, José A. Astrada, Ramon Malo.
	3 Schools	692								$46 12	$319 75			$1,400 00		$1,760 00	$2,585 87				*346	30	*346						4 Teachers		

Note.—Report received after apportionment. * Not Official.

CONDENSED STATEMENT—CONTINUED.

TRINITY COUNTY.—D. W. POTTER, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between the ages of 6 and 18 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. 31st.	State Fund apportioned June 30th.	State and County Funds on hand, Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repairs School Houses.	Time of service of Teacher (m's. w's.	Salaries per Month	State Fund paid for Salaries.	Salaries paid by Parents of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	TEACHERS.	TRUSTEES.
Weaverville	Weaver No. 1	62								$85 79			10	$100 00	$191 60	$463 00	$537 00				Primary	32		30		12		8		A. J. Neblett	O. H. R. Norcross, Levi Reynolds,
Stewart		18																				7		11							
	1 School.	80			$49 57					$85 79					$191 50	$463 00	$537 00			$642,077		39		41		12		8		1 Teacher.	

NOTE.—Report received after Apportionment.

SANTA CRUZ COUNTY.—A. R. HATHAWAY, Sup't.

Santa Cruz	Santa Cruz	214	201		$256 80	..	..	..	..	$410 55		$138 72	†				$2,030 35	$2,169 07	$1,322 25		Unclass'd	94	39	120	37	60	76	50	44	Mrs. E. Farnham, E. Perry, C. V. Anthony, E. F. Dane	R. Catheart, J. W. Wright, Geo. W. Frick.	
Pajaro	Watsonville	105	143		126 00	..	..	..	..	292 09			3	100 00		450 00	825 00		1,340 00		Primary	60	29	45	20		49		18	J. K. Luttrell, D. Loyde	Thomas Davis, J. Grove, Chas. Carter.	
													3	100 00																		
Soquil			80			..	..	..	..	163 40									750 00		"		51		29		47		25		John Harnes, Isaac Parry, L. G. Caldwell.	
	2 Schools.	319	424		$382 80	$500 44	$74 40	*$495 00	$392 67	$866 04		$138 72				$2,214 64	$450 00	$2,855 35	$3,057 31	$3,412 25	$990,000		154	119	165	86	60	172	50	87	6 Teachers.	

* Assessed. † The Expenditures indicate more than three months.

SHASTA COUNTY.—J. N. CHAPPELL, Sup't.

Shasta	Shasta	163	163		$195 60		..	..	..	$332 94			3	$125 00	$103 37	$130 30	$294 96	$294 96	$956 67		Primary	491	91	472	72	63	52	40	26	B. Vanest	Gen. Sprague, T. E. Pelham.
Cottonwood	Red Bluffs	49	73		58 80		..	..	..	149 11			3	100 00				300 00	420 00		"	418	39	431	34	27	23	10	20	E. J. Bradway	A. H. Webb, A. H. Stout.
Clear Creek	Horse Town	83			99 60		..	..	..												"	40		45				12		Mrs. Tinkham, " Elmore	N. Schuyler, Dr. Lake, G. Spencer.
Fitt River	Clover Creek	82	100		98 40		..	..	..	204 26			3	75 00	91 75	105 00	309 38	309 38	225 00		"	48	48	34	52	45	19	32	14	Jas. Raridon, E. I. Mears	J. W. Wilskul, G. M. Hurst, T. B. Boys.
														75 00	112 63																
	4 Schools.	317	336		$452 40	$396 58	$1,213 32	$635 18	*$667 79	$686 31					$307 75	$235 30	$604 34	$903 34	$1,601 67	$1,658,401		197	178	180	158	135	94	82	60	6 Teachers.	

* County and State. † Not Official.

SIERRA COUNTY.—S. FORREST SEABURY, Sup't.

Downieville	1st District	63	54		$75 60		..	..	..	$110 00		$30 00	3	$100 00	..		$300 00	$330 00	$1,279 05	..	Primary	35	36	28	18	31	23	24	20	G. C. Boucher	T. R. Kibbe, A. Smith, W. N. Jackson.
St. Louis	2d "	43	35		..	..	..	..	..	71 49					..		..	..	625 00	..	"	32	26	11	9		18		12	None reported	Messrs. Lowe, Cole, McLaughlin.
Goodyear's Bar	3d "	18			..	..	..	..	..	..					..		..	..	..	..		9		9		..	..	..	..	" "	J. Wilmer, D. Brich, M. Nichols.
Gibsonville	4th "				..	..	..	..	..	..					..		..	..	..	..		..	..	..	..	..	..	..	..	" "	Messrs. Cunningham, Gazel, Post.
Pine Grove	5th "				..	..	..	..	..	..					..		..	..	..	..		..	..	..	..	..	..	..	..	" "	Downer, Stewart, Thurston.
Eureka	6th "				..	..	..	..	..	..					..		..	..	..	..		..	..	..	..	..	..	..	..	" "	Freegel, Kimball, Bleock.
Monte Christi	7th "				..	..	..	..	..	..					..		..	..	..	..		..	..	..	..	..	..	..	..	" "	Young, Alleo, —.
Forest City	8th "	60			72 00	..	..	..	..	..			4	130 00	..		..	..	..	..	"	36		24		26		26	..	" "	Platt, Lunds, Flemming.
Minnesota	9th "				..	..	..	..	..	..					..		..	..	..	..		..							..	" "	Bousge, Nugent, McMillan.
Rabbit Creek City	10th "	57			..	..	..	..	..	..					..		..	..	..	..		32		25		..	..	..	..	" "	
Brandy City	11th "				..	..	..	..	..	..					..		..	..	..	..		..	..	..	..	..	..	..	..	" "	
Poker Flat	12th "				..	..	..	..	..	..					..		..	..	..	..		..	..	..	..	..	..	..	..	" "	
	2 Schools.	241	89		$147 60	$223 07	*$453 39	$1,208 22		$181 75		$30 00					*$986 50	$1,167 69	$1,904 05	$1,800,065		144	62	97	27	67	41	50	32	2 Teachers.	

* Treasurer's Report.

SISKIYOU COUNTY.—HON. S. P. FAIR, Sup't.

Yreka	Yreka	157	93		$188 40	$109 76	$221 73	$625 00		$189 96		$150 00	6	$150 00	$299 72	$272 00	$900 00	$1,050 00	$1,097 32	$2,671,933	Primary	82	23	75	20	46	43	27	22	W. B. Bonnifield	R. W. Arnold, N. C. Mayhew.

SOLANO COUNTY.—J. W. ANDERSON, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between the ages of 4 and 18 years.	Children reported previous year.	Orphans.	State Fund apportioned for 1st.	State Fund apportioned June 30th.	State and County Fund, Dist. Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repair of School Houses.	Time of service of Teachers. m's. w's.	Salaries per Month.	State Fund paid for Salaries.	Salaries paid by Balance of the School.	Total paid Salaries.	Total Expenditures for Schools within each District. 1855.	1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	1854.	Number of Girls. 1855.	1854.	Pupils attending School. 1855.	1854.	Daily average attendance. 1855.	1854.	TEACHERS.	TRUSTEES.
Vallejo	No. 1	71			$85 20							$30 00	1 3	$100 00 *				$260 00			Primary	42		29		45		36		G. G. Rowley Miss Frost	J. W. Frisbee, B. S. Osborn, R. Brownlee.
Benicia	" 1	229	198	13	274 80		$241 21			$404 43	$3 00	61 25	12	150 00	$629 43	$544 95	$1,800 00	1,950 00	$2,032 94		Grammar	87	105	142	93	71	48	60	30	C. J. Flatt	City Board—D. N. Hastings, Sup't, J. Parks, T. Farmer.
Green Valley	" 1	60	72		72 00		87 92			147 06	51 57	8 00	9					809 57	1,596 66		Primary	37	40	23	31	38	44	26	24	Jas. Monroe	A. O. Lamoree, J. Stilts, D. B. Holman.
Suisun	" 1	69	91		166 80					368 70		35 00	9	85 00	367 50	367 50	765 00	800 00	595 00		"	31	46	38	45	30	43	19	29½		
	" 2	35	45				39 69					167 00	5	85 00	127 50	297 50	425 00	592 00	210 00		"	20	19	15	26	20	30	12	19½	H. B. Jewett	J. S. Sheldon, A. P. Jacks, H. G. Wetmore.
	" 3	35	45				1 94						7 2	85 00	319 34	319 75	637 50	637 50	235 98		"	18	24	17	21	25	30	20	17½	J. P. Merrill	
Vacaville	Pleasant Retreat	76	123		170 40		117 49			251 24		65 00	6	90 00	195 00	345 00	540 00	605 00			"	32		44		47		27		J. W. Anderson	W. A. Dunn, A. C. Hawkins, Wm. Raymond.
	Mound School	34										43 50	3	75 00	112 50	112 50	225 00	268 50	740 00		"	21	64	13	59	25	45	14		E. A. Young	
	Sylvas School	32											3	50 00	75 00	75 00	150 00	150 00			"	15		17		11		11		Merit Tilory	
	9 Schools.	641	574	13	$769 20	$677 49	$488 15			$1,172 43	$59 57	$409 75			$1,806 27	1,762 05	$4,542 50	$6,072 07	$5,410 58			303	298	338	275	218	237	227	120½	10 Teachers.	

* Per Scholar. † Ten Cents on the Hundred Dollars.

SONOMA COUNTY.—DR. B. B. BONHAM, Sup't.

Petaluma	Bower's School	147											9	$140 00		$490 00					Grammar and Primary	66		54		120		60		A. B. Bowers, Pr'l. C. L. Francis Miss M. C. Morse	
			227		$358 80	..	..	..	..	$463 66	$35 25	$1,997 82	2	82 00		82 00															
													4	50 00		100 00															
													3								"									A. Coruthers " H. Bassett	S. W. Brown, George Harris, Mr. Bassett.
													3			372 01	†$957 00	$3,770 07	$1,164 65		"	‡156	44	‡128							
"	No. 2	48											6								"					48		30		H. S. Babcock	
"	" 3	61											2								"					33				M. Gaston	
"	" 4	43											3								"				24	18		8½	27	Martha Acton	
Santa Rosa	Santa Rosa		46										11	100 00					507 00		"									D. B. Ogun	
"	Union Hall		72										4	100 00					240 00		"									W. M. Williamson	
"	American	240		3	288 00	..	..	..	..	283 91			6	100 00		1,042 25	†1,049 25	2,096 50			"	131	33	110	30	120	63	94	37½	E. M. Watts	S. S. Williams, J. N. Bennett.
	Santa Rosa No. 2												3	80 00							"									W. S. Babcock	
													3	80 00							"									H. Richardson	
Mendocino	Washington	67	45		80 40	..	..	..	..	91 92		200 00	3			228 00	†215 00	515 00	200 00		"	‡37	13	‡30	3	19	16	13½	11	G. T. Espry	J. B. Lamance, E. S. Espy, J. R. Peck.
													3								"					24		17		R. J. Yancy	
Russian River	No. 1	98	75		117 60	..	..	..	..	153 19			3	75 00		171 25	†171 00	211 25	150 00		"	‡48	15	40	14	67	29	37½	16	C. W. Arms	M. Cunningham, J. W. Yates, J. Smith.
													2	25 66							"									J. Seward	
Sonoma	Ash Creek			1									3	75 00							"					21		13		H. T. Ruelon	
	Dunbar No. 2	193	234		231 60	..	..	..	..	477 95			5	60 00		507 91	†389 62	738 00	286 00		"					24		16½		J. R. Maulding	S. B. Bright, B. B. Mundry, S. Acrey.
	Watmough No. 3			3									3	50 00							"		65		34	33	99	22	65	Mrs. Hill	
	City No. 4			4									3	60 00							"	‡98		‡95		36		20		J. P. Sipes	
Annally	Union No. 1	45											3	50 00		75 00	†75 00				"							13		W. S. Babcock	
	Oak Grove No 4	36											3	50 00		75 00	†75 00				"							10		S. T. Robinson	
	Estuary No. 3	43	210		206 40	..	..	..	..	428 94	42 00	52 50	3	50 00		74 00	†75 00				"							20		S. C. Hoag	
	Jackson No. 5	55											3	35 00		106 00	†106 00	1,888 38	1,482 00		"	‡111		‡111	38	162	97	12½	54	John Acton	B. B. Bessy, T. M. Ward.
	Estuary No. —	43											1 3			389 07	112 50				"		22		18	40		20	25½	G. W. Arms	
													3	100 00		187 50	348 81				"	‡90		‡80				25		W. M. Williamson	
													3	65 00		145 00	60 00				"							21			
Vallejo	No. 1	15											3	75 00							"							15		C. Curtis	
"	" 2	36	112		94 80	..	..	..	..	185 87	300 00		3	60 00		90 00		665 00	342 50		"		16		17	26	23	20	15	C. M. Wells	L. Noogh, A. Copeland, S. Payran.
"	" 3	28											6	62 50		187 50					"	‡49		‡30		28		18		F. Taylor	
Bodega	Watson No. 1	43										285 00	1	62 00		65 00		360 00			"	50		23		17		17		S. H. Dickenson	Samuel Potter. James Watson, G. Robinson.
	23 Schools.	1,253	1,021	11	$1,489 20	$1,205 08	$357 81	$357 81		$2,085 44	377 25	*$3,656 02			*$3,298 21	4,324 49	†$3,939 27	$10,234 14	$5,672 35	$3,041,113		206	208	610	175	801	367	336	241	31 Teachers.	

* Treasurer's Report. † Evidently Incorrect ‡ Probable Number.

STANISLAUS COUNTY.—E. B. BEARD, Sup't.

COUNTY AND CITY, TOWNSHIP OR SCHOOL DISTRICT.	NAME OF SCHOOL.	Children between the ages of 4 and 18 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. 31st.	State Fund apportioned June 30th	State and County Fund, 1st Mond. Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repair of School Houses.	Time of session of each sch'l. m's. w's.	Salaries per Month	State Fund paid for Teachers.	Salaries paid by Patrons of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	Total Expenditures for Schools within each District. 1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	Number of Boys. 1854.	Number of Girls. 1855.	Number of Girls. 1854.	Pupils attending School. 1855.	Pupils attending School. 1854.	Daily average attendance. 1855.	Daily average attendance. 1854.	TEACHERS.	TRUSTEES.
Branch.....	Branch.....	60	60		$72 00								6								Primary							13		None given.....	Dr. J. Davis. J. D. Morley, J. H. Gordenbire.
....	Muroni.....	14	14		16 80								8								"							4		" "	James Huddleson, Wm. Sharp, Wm. Flack.
	2 Schools.	74	74		$88 80	$95 60	$245 15	$159 55															40		41			17			

NOTE.—No Report from the Treasurer.

SUTTER COUNTY.—DAVID O. MAHONEY, Sup't.

Yuba City.....	Columbia.....	103	78		$123 60		..	*	..	$159 32			{ 7 2 / 3 2	$75 00 / 100 00		275 00 / 250 00		$341 66	$518 30		Primary	56	40	48	38	25	23	12	12	{ R. C. Milner / Edwin Crane.....	E. E. Wilcoxson, A. S. Brown, J. L. Smith.
Nicolaus	Nicolaus	41			49 20		..	..	..	..			3 2	75 00		309 00		309 00			"	19		22		21		16		A. S. Fernel	Jas. T. Lee, D. H. Redfield, J. H. Alger.
Bear River.....	No. 1.....	41			49 20		..	..	..	..		$50 00	3	100 00		300 00		250 00			"	24		17		21		16		J. P. Stearns.....	H. H. Flagg, M. Boulware, N. Kempton.
Vernon	No School.....	14					..	..	..	..											"	9		5						No School.....	
	3 Schools.	199	78		$222 00	$92 06	$1,03[illegible] 80			$159 32		$50 00				1,150 66	$1,150 66	$1,200 66	$518 30	‡$1,243,148		107	40	92	38	67	23	44	12	4 Teachers.	

* Ten Cents on One Hundred Dollars. † And Board. ‡ 1854.

TULARE COUNTY.—F. DEMASTER, Sup't.

Visalia.....	Visalia.....	82	50		$98 40			*		$102 13		$12 93	4	$82 00		$328 00	$414 16	$427 09	$540 60		Primary	44	26	38	24	32	19	18	16	S. B. Carpenter.....	W. Watson, R. Mathews, J. Thorne.
Kings River	No School.....		23							46 98									270 00		"		15		8		15		11		
	1 School.	82	73		$98 40	$86 16		$16 17		$149 11		$12 93			$86 16	$328 00	$414 16	$427 09	$810 00	†$193,137		44	41	38	32	32	34	18	26	1 Teacher.	

* Five Cents on One Hundred Dollars. † 1854.

TUOLUMNE COUNTY.—ROBERT PORTERFIELD, Sup't.

Township No. 1....	Sonora.....	177	128		$212 40	..	..	..	..	..			3	$125 00	$100 00	$255 00	$355 00	$355 00			Primary	†97	67	†80	61	61	60	29	60	E. B. Nye	Dr. L. C. Gunn, John Yaney, Fred. Salter.
" No. 2....	Columbia No. 1.....	87	131		208 80	..	..	..	..	..			3	150 00	202 00		202 00	202 00			Grammar	64	76	23	56	62	30	40	30	{ Robert Porterfield / Mrs. Chamberlain.	{ John Leary, A. H. Crittenden, J. H. Brodt.
" No. 2....	" No. 2.....	87											3	150 00	202 00		202 00	202 00			Pri.&Gra.	47		46		45		30			
" No. 2....	Shaw's Flat.....	75	41		90 00	..	..	..	..	..		$101 00	3	72 00	82 00	134 00	216 00	317 00			"	†50	25	†26	16	26	41	20	18	H. A. Nelson	Wm. J. Markley, W. H. Davis, G. C. Havens.
" No. 2....	Springfield.....	75	40		90 00	..	..	..	..	..			3	125 00	130 00	187 00	317 00	317 00			"	49	25	26	15	20	40	16	17	E. B. Nye	N. Foles, Calvin Honey, R. L. Smith.
" No. 3....	Jamestown	163	71		195 00	..	..	..	..	..		152 00	10	125 00	84 00	715 00	799 00	1,235 00			Primary	†90		†73		60		24		Elisha Hyde	J. M. Stewart, E. A. Rodgers, S. C. Brunson.
" No. 4....	Jacksonville	15	11		18 00	..	..	..	..	..			3	40 00		60 00	60 00	60 00			"	†7	7	†8	4	9		6		Rev. R. McCulloch..	J. H. Dearing, E. H. Dudley, G. B. Keyes.
Don Pedro's District.	Don Pedro's Bar....	48	30		156 00	..	..	..	..	..			3	80 00		120 00	120 00				"	29	16	19	14	25		18		Alma Plummer.....	Jacob Gardner, Messrs. Hammond, Hobart.
" "	Chinese Camp.....	82				..	..	..	..	..												†50		†32							
	8 Schools.	809	452		$970 80	$577 16	$188 63			$694 47		$253 00			*$1,083 00	1,471 00	$2,554 00	$2,809 00	$170 00	$2,423,510		483	215	326	166	288	141	182	125	8 Teachers.	

* Treasurer's Report. † Not Official.

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CONDENSED STATEMENT—Continued.

YOLO COUNTY.—M. L. Mering, Sup't.

County and City, Township or School District.	Name of School.	Children between the ages of 4 and 15 years.	Children reported previous year.	Orphans.	State Fund apportioned Dec. 31st.	State Fund apportioned June 30th.	State and County Fund on hand Oct. 31st.	County Fund received.	County Fund paid out.	State Fund apportioned previous year.	Paid for School Libraries and Apparatus.	Building, rent and repair of School Houses.	Time of Service of Teachers. m's. w's.	Salaries per Month	State Fund paid for Salaries.	Salaries paid by Patrons of the School.	Total paid Salaries	Total Expenditures for Schools within each District. 1855.	1854.	Assessed value of Property in the County.	Grade of School.	Number of Boys. 1855.	1854.	Number of Girls. 1855.	1854.	Pupils attending School. 1855.	1854.	Daily average attendance. 1855.	1854.	TEACHERS.	TRUSTEES.	
...he Creek, No. 1..	District No. 1	278	191	18	$333 60	..	..	..	..	$390 10			5	$60 00	$300 00	$200 00	$500 00	$500 00	$542 00			65	42	77	15	120	27	21	22	L. B. Ruggles	F. C. Ruggles, J. T. German.	
" Dist. No. 2.	" No. 2												5	100 00								85		51		26		20	16	C. D. Tibbetts	W. C. Wright, P. Crowder, J. G. Bower.	
...shington	No. 1	64		11	76 80	..	..	..	..	..			2	80 00		160 00		160 00			Primary					22		16		Emma Alexander	H. G. Griffith, J. M. Hoag, E. C. Taylor.	
												$60 00	5 2	60 00	73 00	339 50		632 50			Grammar	33		31		24		18		M. A. Wheaton		
...tonwood	Cottonwood No. 1	95	91		114 00	..	..	..	..	185 87			4	62 75	*251 00		251 00	251 00	275 00			Primary					14		14		M. Woods	Messrs. Anderson, Stephens.
	4 Schools.	477	282	29	$524 40	$394 22	$481 97			$575 97		$60 00			$624 00	$699 50	$1,069 00	$1,543 50	$817 00	†1,990,576		183	42	159	15	180	53	89	38	5 Teachers.		

* Treasurer's Report differs, and gives but $188 25. † 1854.

YUBA COUNTY.—J. M. Abbott, Sup't.

...rysville	A. B. C. D.	358	295		$429 60			*10,240 00		$602 56			7	$100 00	1,003 60	7,140 00	$700 00	10,097 00	$9,002 50		Grammar and Primary	196	151	162	144	278	200	129	115	F. K. Mitchell	‡H. S. Hobbitzell, J. T. McLean, A. G. Coffin.
													12	100 00			1,200 00													Mrs. Wickersham	
													12	200 00			2,400 00													D. C. Stone	
								†105 00					2	140 00			280 00													Miss H. Macy	
...ng Bar	Long Bar	34			40 80						$25 00		3	90 00		270 00	270 00	295 00			"	12		22		12		7		Eliza F. Tolls	Peter Rice, Ransom Foalks, E. G. Park.
...da	Lynda	68			61 60								3	100 00		150 00	300 00	300 00			"	36		32		21		13		J. P. Stearns	E. Allison, T. Vestal.
...g Bar	Peoria	38	69		45 60					140 94	25 00	$450 00	3	75 00	136 78	721 00	917 00	1,392 00	550 00		"	18	34	20	35	25	15	12	8	Owens Connelly	D. J. Gashine, J. Laverty, D. B. Humes.
	7 Schools.	498	364		$597 60	$429 62		$10,345 00		$743 50	50 00	$450 00			$1,140 38	8,281 00	$6,067 00	$12,084 00	$9,552 50	$5,109,804		262	185	236	179	336	215	161	123	7 Teachers.	

* From City and County. † Estate of Aliens deceased. ‡ Who present a very cheering Report of the character and progress of the Marysville Schools.

SUBJECTS.

I. REQUIRED AND ACTUAL APPROPRIATIONS.

II. IMMIGRANT WAGON ROAD AND EASTERN BOUNDARY SURVEY.
1. Explorations and Eastern Boundary Survey.
2. Survey of Road.
3. Protest.
4. Other Roads Recommended.

III. STATE LANDS.
1. School Lands.
2. School Land Warrant Locations.
3. Swamp and Overflowed Lands.

IV. COUNTY BOUNDARIES.
1. Surveys under Special Acts.
2. Surveys under General Act.
3. Indefinite, Disputed and Objectionable.
4. Defects of, and Proposed Amendments to, Acts Defining.

V. COUNTY ROADS.

VI. MAP OF THE STATE.
1. Goddard's Topographical Map.

VII. STATISTICS.
1. Reports from County Surveyors.
2. " " Assessors.
3. " Others.
4. Statistical Table.
5. Recapitulation.
6. Statistical Notes.

VIII. APPROPRIATIONS RECOMMENDED.

IX. CONCLUSION.

X. APPENDIX.

REPORT.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, Jan. 7, 1856.

To His Excellency, JOHN BIGLER,
Governor of California:

SIR:

In compliance with "An Act Concerning the Office of Surveyor-General," I respectfully submit the following report:

The following is a list of Acts passed by the last Legislature, imposing important duties upon the Surveyor-General:

"An Act to Provide for the Survey and Construction of a Wagon Road over the Sierra Nevada Mountains," approved April 28, 1855.

"An Act to Provide for the Selection of Lands, Donated by the United States to the State of California, for the Support of Common Schools, and for the Erection of Public Buildings," approved May 7, 1855.

"An Act to Provide for the Sale of the Swamp and Overflowed Lands, belonging to this State," approved April 28, 1855.

"An Act to Provide for Settling the Boundary Line between the Counties of Santa Cruz, Santa Clara and San Francisco," approved May 2, 1855.

"An Act to Establish a Prominent [Permanent] Boundary Line between the Counties of Stanislaus and Tuolumne," approved May 4, 1855.

The "Act Concerning the Office of Surveyor-General," passed April 17, 1850, besides many other important requirements, contains the following: "When called upon by the county authorities of any county, he shall run any boundary line, or portion of a line, between such county and an adjoining county."

I. REQUIRED AND ACTUAL APPROPRIATIONS.

To have enabled the Surveyor-General properly to perform the duties assigned him in the above named Acts, there should have been appropriated:

For explorations and surveys under the Immigrant Wagon Road Act	$15,000
For expenditures under the Act for Selection of Lands, and the Act for Sale of Swamp and Overflowed Lands	10,000
Amount carried forward	$25,000

$100,000 for the payment of contractors, and $5,000 for the payment of the expenses of the survey; and that the Controller is authorized to audit the accounts of the contractors and Surveyor, and issue warrants for the same.

A grave doubt, as to the constitutionality of the Act itself was suggested by the Governor in his message of approval, (if it can be so called,) and I would advise that no steps be taken under the Act, until a judicial decision can be had on the question of its constitutionality.

J. R. McCONNELL,
Attorney-General."

Believing it to be necessary to comply, as strictly as possible, with the requirements of the Act, leaving to those so disposed the task of testing its constitutionality, the purchases were made, the certified accounts, accompanied by the opinion of the Attorney-General, sent to the Controller's office, when information was received that they could not be audited in the absence of the Controller, the law requiring that "no warrants shall be drawn on the Treasury, except there be an unexhausted specific appropriation by law to meet the same."

Indulging the hope that the Controller would take a more favorable view of the Act when he should return, temporary relief was sought by drawing on the Contingent Fund. Those of whom the purchases were made, had been assured that warrants were worth eighty-three per cent., and the warrants were drawn with that understanding, but on being offered for sale, would bring but sixty, as they could be neither funded nor registered for redemption. I therefore took the warrants myself, and advanced the funds necessary to defray the expense of these and subsequent purchases, made prior to July 1st; it being anticipated that warrants to be issued for expenditures incurred after that date—as they would be subject to registry and redemption—would be much more valuable.

If all the funds provided to carry on the operations of this office, had been disposed of before that date, there would have been realized $821 26, about sufficient to pay for stationery, fuel, lights, etc. By waiting until after July 1st $1,026 58 were realized.

The accounts for rent have since (mostly) been audited by the Controller.

With the above exceptions, all the financial affairs of this office have been carried on independent of the State Treasury.

Having learned, on the 4th of June, that the Controller had returned, I addressed him the following communication, which was transmitted on the 5th:

"Surveyor-General's Office,
Sacramento, June 4, 1855.

Hon. Sam. Bell, Controller of State:

Sir:

I have the honor herewith to transmit a copy of 'An Act to Provide for the Survey and Construction of a Wagon Road over the Sierra Nevada Mountains,' and respectfully request that I may be informed whether any accounts will be audited under said Act.

Having made some purchases preparatory to the commencement of a reconnaissance of the routes for said road, I was informed during your absence, that no accounts could be audited under the Act, whereupon I applied to the Attorney-General for his opinion in the matter, which I also transmit for your consideration.

Allow me to request an answer at your earliest convenience, as the Board of

Commissioners now only await your decision to know what steps to take in this important matter.

Be kind enough to return with your answer, both the Act and the opinion, and greatly oblige, Very respectfully,

Your Obedient Servant,

S. H. MARLETTE,
Surveyor-General."

On the same day the following reply was received:

"OFFICE OF CONTROLLER OF STATE,
Sacramento, June 5, 1855.

S. H. MARLETTE, Surveyor-General:

SIR:

Your favors of this day are at hand, and your requests will be attended to on return of the Controller, who left the city this morning.

Respectfully yours,

ELAM COVINGTON,
Clerk Controller's office."

On the same day also, Dr. Bradley, of Diamond Springs, left this city for the purpose of finding the best route for a road over the Sierra Nevada, in the neighborhood of the South Fork of the American River, and of opening a trail and finding crossing places over the streams, along or near said route, in order that the Commissioners might be able, without too much delay, to see the most practicable route in that region.

The expense was to be defrayed by subscription; and I had assured the Doctor that so soon as he should report himself in readiness, I (and probably the other Commissioners) would accompany him across the Sierra Nevada. On the 11th he wrote the following from Diamond Springs: "I start to-morrow morning with the necessary party to open the trail, and will advise you immediately on return."

The opinion had been entertained that the Commissioners would go over the several routes, and select (in their judgment) the most practicable and economical one; or, if necessary, select two or more, for a more thorough examination, to enable the Board to decide properly upon their relative merits, and that, *after the selection of the route*, it would devolve upon the Surveyor-General of the State to cause to be surveyed a good wagon road, upon the same.

The following communication was received on the 9th of June:

"To the Hon. S. H. MARLETTE, Surveyor-General:

DEAR SIR:

I have the honor to inform you that at a regular meeting of the Board of Wagon Road Commissioners, held in the City of Sacramento, on the 9th day of June, 1855—present, His Excellency, Governor Bigler and Surveyor-General Marlette—the following resolution was passed:

Resolved, That the Surveyor-General of the State of California be, and he is hereby instructed, to make such explorations as may be necessary to enable him to estimate the expense of constructing a good wagon road, upon the various practicable routes across the Sierra Nevada Mountains, in this State, and to report the same to this Board, together with all the facts necessary to enable the Commissioners to select the most practicable and economical route.

I remain, very respectfully,
Your Obedient Servant,

CHARLES H. HEMPSTEAD,
Secretary of Board of Wagon Road Commissioners.

Sacramento, June 9, 1855."

Shortly after the adjournment of the Legislature I opened a correspondence with the Hon. Sherman Day, the object and result of which was to secure his services in the explorations and surveys to be made under the Wagon Road Act. He had just arrived at Sacramento, and was awaiting orders at the date of the above resolution.

The resolution passed on Saturday, and on the following Monday Mr. Day left this city for Georgetown, to commence the explorations; (it having been previously arranged with the Hon. John Conness, that the citizens of that place should have a suitable party organized and provisioned to accompany, at their expense, myself or my appointee, over their route,) and from that time to this (the 7th of January, 1856) Mr. Day has been almost constantly engaged upon either the explorations or surveys, under circumstances well calculated to discourage and disgust.

In his report of September 20th, constituting Appendix A, No. 1, to which I respectfully refer, will be found a statement and description of the routes examined by him.

To neutralize the effect of certain statements, which might otherwise destroy the confidence of the people in the Commissioners, and thereby render ineffectual my efforts to obtain assistance from the friends of the several routes to explore the same, the following facts were published on the 25th of June:

That no appropriation was made by the Legislature to pay for the survey of the Road; that the Law prohibited the Controller from drawing warrants without an express appropriation; that the Act, though it says that $5,000 may be expended for the survey, does not appropriate the money; that the $100,000 of bonds to be issued, are exclusively for the payment of contractors, consequently the preliminary examinations and the survey must be made without funds, and with no security for the payment of the expenses, except the justice of the next Legislature; that under these circumstances the Surveyor-General was necessarily embarrassed in procuring competent aids, as his contingent fund was scarcely sufficient to pay office expenses; but even were it ten times as large, he would not have the means to perform all the duties imposed on him by the last Legislature; that the Acts providing for the selection of the State Lands, and for the sale of the Swamp Lands, make it necessary for him to keep one or two competent draftsmen in his office all the time, yet not a cent has been appropriated to pay them, etc., etc.; and that these were but a portion of the embarrassments under which he labored.

On the 2d of July a communication from the Controller, dated June 30th, in reply to mine of the 4th of June, was received, stating that he could not audit any accounts under the provisions of the Wagon Road Act.

Dr. Bradley returned on the 3d of July and reported himself as having been

driven from the field by hostile Indians, bnt not until his object had been nearly accomplished.

In consequence of the Doctor's extremely favorable report upon the advantages of his route, viz: "that by merely riding over it and the other routes, the Commissioners would be able to select his, to the exclusion of all others," I gave him a statement to the effect that, if he would raise the necessary party to enable him, with safety and at a moderate expense, to complete his undertaking, to wit: the opening of a trail over said route, sufficiently to insure for it a fair examination during the coming week, I would urge upon the Legislature the propriety and equity of paying for the same out of the State Treasury.

The Doctor has put a very liberal construction on the above, and sent in bills to the amount of $2,224 73, to which add $250, for which bills have been sent in by Mr. Taylor, and $230 contributed by citizens of Diamond Springs, and other places, and we have as the total cost of *opening a trail over a part of one route*, the enormous sum of $2,704 73.

I would respectfully recommend that $500 (which is more than was, or could have been, reasonably anticipated) be appropriated to defray the "moderate expense" incurred "during the coming week" mentioned above. Concerning the balance I have nothing to say.

On the 7th of July, at the request of Hon. Thomas Kendall, Senator from Tuolumne, I sent to him a communication, embodying the substance of what I had stated in conversation to him, and many other gentlemen from various parts of the State, with whom I had met in this city. The following are extracts:

"As you are well aware, the last Legislature unfortunately neglected to appropriate anything for the survey of the great Road across the Sierra Nevada, I am not willing to remain quiet however, until I have selected the best route, made a survey of the same, and laid an estimate of the cost of constructing a good Wagon Road upon it, before the Board of Commissioners.

To do these things requires both men and money, and I know of no other way of obtaining them but to call upon the friends of the various routes to supply the same. On Tuesday next I intend starting for El Dorado County, for the purpose of riding over one or more routes across the mountains to Carson Valley. In about two weeks, provided I receive sufficient encouragement, it will afford me great pleasure to visit Sonora, and join a party to ride over the route, of the great advantages of which you speak so sanguinely.

The kind of encouragement I want is this: A sufficient party for protection, one or more of whom should be competent guides, familiar with the country to be traversed. I would very much like to have your County Surveyor make one of the party. The expense of the expedition must be defrayed by your citizens.

Should your route be adopted as the only one to be surveyed, the State would undoubtedly be holden for the costs of the same, as I consider myself authorized to use her credit to the amount of $5,000; but as I am of the opinion that two or three routes will require surveying, and as I am certain that the sum named is not sufficient, I have to use great caution in authorizing expenditures on preliminary examinations. Knowing how anxious you are to have something done in this matter, I leave it to you to represent the same in its proper light to your constituents, and hope to hear from you so soon as you learn what, if anything, can be done."

As the citizens of Sonora had been represented as waiting anxiously, with open purses, to help this project along, I anticipated an early reply to the above; but *none has yet been received.*

Near the close of June I received a communication from Wm. Fowle Smith, Esq., of Camptonville, accompanied by a correspondence between a committee on the part of the citizens of that place and Col. Walter E. Jones, concerning the "Henness Cut-Off" route for the Immigrant Road.

Mr. Smith says: "I am requested by the Committee to say to you and your associates on the Commission, that they will be most happy to render you any assistance, or furnish any information in their power, whenever you commence the reconnaissance of the route through this town.

We confidently believe this to be the best route for an Immigrant Road to the Valley of the Mississippi, and hope it will receive a careful examination by the Commissioners of the State."

On the 10th of July I received another letter from Mr. Smith, calling my attention to said correspondence, and requesting a reply and a copy of Colonel Jones' letter, stating that the citizens of Camptonville were anxious to lay the whole correspondence before the people of the State.

The following was sent in reply:

"Surveyor-General's Office,
Sacramento, July 10, 1855.

Wm. Fowle Smith, Esq., Camptonville, Yuba County:

Dear Sir:

Your favor of June 21st, together with the correspondence between the Committee of citizens of Camptonville and Col. Walter E. Jones, in relation to the route for the Great Immigrant Wagon Road, by the 'Henness Cut-Off,' came to hand about the last of June.

Your favor of the 6th inst., calling my attention to the above named correspondence, I have just received.

Until quite recently I have not known officially, that the Controller would not audit accounts for surveys under the Wagon Road Act, although, I confess, I was certain of the fact, inasmuch as the Legislature failed (unintentionally) to make an appropriation for the purpose, and the Controller is forbidden to audit except there be a specific, unexhausted appropriation.

The Wagon Road Act is but one of several very important Acts passed by the last Legislature, which render it necessery to employ competent engineers and draughtsmen to assist me, and as not one dollar has been placed at my disposal for this purpose, I am delayed in the performance of my duties by the necessity of finding assistants who are able and willing to pay their own expenses and trust the State for the same, as well as for compensation, until a Legislature, some nine months hence, may, if so disposed, make the requisite appropriation. But these even are not all the obstacles in my way. These might be overcome, but there is another more difficult to surmount. I am limited in using the credit of the State to five thousand dollars, a sum that every one knows, who knows anything about the matter, is entirely insufficient for the proper location of the road. Yet, it must be properly located, if at all; at least, this is the opinion of one of the Commisioners, and I believe, of all. Can this be done? I believe it can, and in this way:

The friends of the various routes can organize parties, supplied with provisions and other necessaries, sufficient for the purpose of making a reconnaissance.

I will accompany the parties, or appoint an engineer to do so, in whom I have perfect confidence, and who will trust the State for compensation.

Should your favorite route be selected as one, or the only one to be surveyed, then its proportion, or the whole, as the case may be, of the $5,000, or so much thereof as may be necessary, can be used in the survey of your route.

I have received ample authority from the Commissioners to make the necessary surveys, and if they are not made, the responsibility rests on me alone.

In Georgetown, Diamond Springs and Mud Springs, money has already been raised, and I have reason to believe that in Sonora, funds are now being raised to enable me to accomplish one important object of the Act. What will the citizens of Camptonville do? They have now a splendid opportunity to back the high opinion they entertain of their route.

I start soon, perhaps to-morrow, for Carson Valley, over one route; and on my return, hope to hear that you have performed your part in this matter, and are anxious to have me perform mine.

Please write soon, and inform me what you have done or can do, that I may make my arrangements accordingly.

I really have not time to copy the letter you speak of, so I send the original, that you may take a copy. Please return the original to me.

In great haste,

I am, very respectfully, your obd't serv't,

S. H. MARLETTE,
Surveyor-General."

This correspondence was published in July, and drew out the concession from a portion of the local press, that the route through El Dorado possessed "a great many things, physical, moral and social, in its favor;" that the people of Yuba and Sierra evinced no interest in their particular route, and that they remained "as immovable as a corner stone of a church."

This was very discouraging, yet I had great hopes that Camptonville, at least, would render itself "most happy" by furnishing the desired assistance, according to the assurances of Judge Smith's letter, but no reply to my communication has ever been received; nor has Colonel Jones' letter, setting forth the advantages of the Downieville, or Henness, route, been returned, both of which I greatly regretted, as I was desirous of obtaining reliable information in regard to all the practicable passes in the Sierra Nevada, not only to enable the Commissioners to select the most practicable and economical route, but also to serve as a basis for appropriations for the construction of such other roads as future Legislatures might deem necessary.

On the 16th of July the following, in regard to this matter, was published:

"The great difficulty has been, and is, in raising funds for the purchase of the requisite instruments, and the pay of the necessary assistants, as the law does not make any appropriation for the purpose, and the Controller cannot, and will not, audit the bills incurred on these accounts. But it is expected that the inhabitants adjacent to the various routes will furnish the money necessary to make the surveys on them, and that within a reasonable time the estimates, maps and profiles will be laid before the Board of Road Commissioners, and the route be determined by them, and the construction of the road be commenced."

Mr. Day, after having completed a reconnaissance of the Georgetown route as far as Lake Bigler, had made a survey of the State Prison grounds, and returned to Sacramento; and on the 16th day of July we started for Diamond Springs *en route* for Carson Valley *via* a route that had been recommended during the last session by O. M. Taylor, Esq., of Cold Spring Ranch, and had recently been partially examined by Dr. Bradley.

I was to have gone over the Diamond Spring Route, but as no guide made his appearance the next morning, I accompanied Mr. Day *via* Placerville. On the 25th we returned to the latter place, where I left Mr. Day on the 26th, endeavoring to organize a party to accompany him over such portions of the routes as we had found it impracticable to examine, or to make such surveys in that vicinity as the public spirit and liberality of the citizens might justify, whilst I hastened to Sacramento, expecting to find assurances from all parts of the State, particularly from Sonora and Camptonville, of the intense anxiety of the people to contribute of their abundance towards the expense of the Wagon Road explorations. I found none, with the exception of one from David Shepherd, Esq., of Murphy's Camp, Calaveras, of which I shall speak presently.

Finding the people in Placerville not very anxious to furnish the requisite means to carry on operations energetically, I wrote to Mr. Day, advising him, (unless they were ready to to co-operate with us by raising the necessary party, provisions, funds, etc., to enable him to continue his explorations, or make a survey, as he and they might deem best,) to leave them until they should become satisfied, not only of the propriety, but of the necessity of doing the same; and stating that I could "find other portions of the State where his labors would be appreciated."

After one week's delay he was enabled to start with a party and outfit, to raise which, one day should have been sufficient.

On the 28th of July I wrote to Mr. Shepherd, as follows:

"Dear Sir:

On my return to this place on the 26th inst., from a trip to Carson Valley, whither I have been in search of the best route for the Immigrant Wagon Road over the Sierra Nevada, I was quite pleased to find your favor of the 12th inst., requesting me not to overlook the claims of Calaveras County, and informing me of the readiness of a part, at least, of her citizens to co-operate with me in accomplishing the object of the Wagon Road Act.

I have heretofore, both in conversation and letters, stated to several of her citizens the fact, that the last Legislature failed to place any funds at my disposal for the survey of this road, and that it would be necessary for the friends of the several routes to furnish the necessary means to make the requisite explorations and surveys; yet, until now, I have received but little encouragement from Calaveras; but, as it is better late than never, your assurances of co-operation are very acceptable.

I would suggest, as the most practicable way to accomplish your desired object, that you organize a sufficient party, under the charge of a competent person, to hunt up the best route to be found between your proposed termini, also to cut the brush and find crossings, sufficiently to enable me or my deputy to examine the same without unnecessary delay, and give information when this shall have been done; after which, I or my deputy will examine the route, and determine whether an accurate survey may be necessary.

Please write immediately, and inform me of your opinion of my suggestion, and of the action, if any, taken by your fellow-citizens.

Hoping to hear from you soon, and that your action may make a visit to your town necessary on my part,

I am, etc."

On the 10th of August an answer was received from Mr. Shepherd, dated the 8th, stating that on the reception of my letter, the citizens of Murphy's immediately went to work, raised about seven hundred dollars, and started a party of

six good men to explore the route, with one Mexican and three animals packed with a good outfit, enough for a month's journey at least; also, that in the party there was one West Point Civil Engineer, a Mr. Hall, who had crossed the Sierra in four different places further north; that in securing his services, they considered themselves quite fortunate; that the party had also one doctor and one surveyor, the rest good mountain men, ready for anything; that he had delayed writing until he saw the party off, etc. He also wrote that he expected the party would be home in about three weeks, when "you will receive a correct report."

On the 5th of August, George H. Goddard, Civil Engineer, left this city with a party and animals, provided by Judge Orson Hyde, of Utah Territory, under instructions, (a copy of which may be found prefixed to his report in Appendix A., No. 3, to which I beg leave to refer,) to proceed to Placerville *en route* for Carson Valley by the Old Carson Route, and to take such barometical observations as would enable him to construct a profile of the same; to take also, a somewhat accurate sketch of the country traversed, and to collect such other data as in his opinion would be of service in comparing the merits of that with other routes for the Immigrant Wagon Road, in respect to both practicability and economy of construction.

In fulfillment of the conditions on which Judge Hyde had agreed to furnish men, animals, provisions, etc., Mr. Goddard was instructed to determine at, or near, Carson Valley, the position of the eastern boundary of the State; and it was suggested that the portion of the same lying in Carson Valley, or so much of it as might be deemed necessary, should be measured and defined with tolerable accuracy, to be used as a primary base in determining trigonometrically the positions of such points as might be found advisable to determine for the purpose of connecting our surveys and explorations, and for fixing the eastern terminus of the road.

From the primary and secondary bases, observations were to be taken to determine the positions of the well defined peaks and other prominent objects of the Sierra Nevada, and other portions of the surrounding country.

He was to return by such route as would most facilitate the selection of the most practicable and economical route for the Immigrant Road, and was, as far as practicable, to take the same observations, for profile, map, etc., coming as going.

It may not be improper to give some of my reasons for authorizing the establishing of the eastern boundary.

I had during the previous year received a petition to locate the same, signed by about one hundred and fifty of the citizens of El Dorado County, among whom are the Hons. Alfred Briggs, B. F. Keene, J. W. Johnson and Messrs. D. K. Newell, S. F. Child, W. M. Cary, etc.

Again; it was considered of importance, if practicable, to have the road located wholly within this State; and the authority of the Commissioners to contract for the construction of any portion of the road beyond the State line, was at least questionable.

It was also believed, that by making the boundary survey auxiliary to the Wagon Road explorations and surveys, the former could be effected without any additional expense to the State; and I am of the opinion that this has been nearly, if not quite, accomplished, notwithstanding the many disadvantages under which Mr. Goddard labored.

I take great pleasure in calling attention to the important results of Mr. Goddard's expedition, as set forth in his valuable report, [in Appendix A., No. 3,] and illustrated by the profiles and well executed map accompanying it.

In one of the towns through which he passed, he was refused a week's provisions for his party on the credit of the State. One public spirited individual

had agreed to furnish the same, but was induced not to do so by false statements to the effect that there was no appropriation in the Act, and funds were subject to the order of the Surveyor-General, to defray surveying expenses, etc., and the animals were kept in durance vile by the stable-keeper, until arrangements were made for settling the stable bill. On hearing of the above I visited the town, informed a portion of its citizens that I had nothing with which to settle the bills, but that unless the provisions were forthcoming, and the animals too, I would move no further in the road matter, in their vicinity. The conditions were complied with.

On the 17th of August, finding it impossible to comply with the requirements of the Wagon Road Act, in a mode commensurate with the importance of the same, in the vain hope of obtaining assistance from some ardent friend of the road, the following advertisement was inserted in the Sacramento papers:

"Wanted, immediately, on the credit of the State, $500, to enable the undersigned to complete the explorations for the Immigrant Wagon Road. Any gentleman who is willing to advance the above named sum, and will signify the same, will be called upon immediately by the undersigned.

S. H. MARLETTE,
Surveyor-General."

Two gentlemen called to inquire what security could be given for the above named amount, to which it was replied: "The justice and liberality of the next Legislature."

It was my intention, had I succeeded in raising the necessary funds, to have gone myself, (so far as other official duties would permit), and to have sent competent engineers into various parts of the State, to urge upon the people the necessity of providing means to explore their favorite routes; but having waited nearly two weeks in vain, as a last resort, I published (until the 15th of September) a notice, of which the following is the substance, together with the accompanying letter of the Controller:

"THE IMMIGRANT WAGON ROAD.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, Aug. 29, 1855.

To the Friends of the Immigrant Wagon Road:

The parties now engaged in exploring routes for the Wagon Road will have returned and reported by the 15th of next month, and immediately thereafter I shall report to the Commissioners, upon whom it will then devolve to select the route upon which the road shall be located. The road will then be surveyed, estimates made, specifications drawn up, and the work advertised and let by contract to the lowest responsible bidder, and the road constructed so soon as practicable thereafter.

I expect to be able to report upon seven or eight different routes. Many more ought to be examined; and I would respectfully urge upon the friends of the various routes that have been neglected, the necessity of sending out parties under competent engineers, to make explorations and report the result as soon as practicable to me.

Should it be absolutely necessary that a few days further time should be granted, and representations to this effect be received, they would receive due consideration, but such necessity is not anticipated.

It may be well to state that the undersigned has not been able to obtain one dollar from the State under the Wagon Road Act, of which any one may be satisfied by reading the accompanying letter from the Controller.

I deem it but justice to the Commissioners and myself to state also, that for nearly two months I have not been able to get one dollar from the State for any purpose whatever, except to pay office rent, and there is no possibility of obtaining hereafter one dollar for the use of this office, except for rent, until another Legislature shall have made an appropriation, for the very simple reason that the last Legislature failed to make appropriations for this office.

Times almost without number, have these statements been made, yet the same fault is found with the Commissioners in general, and the undersigned in particular, as could reasonably be found, if they had an overflowing treasury at their service.

S. H. MARLETTE,
Surveyor-General."

"State Controller's Office,
Sacramento, June 30, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In reply to your letter, asking 'whether any accounts will be audited under an Act to provide for the survey and construction of a Wagon Road over the Sierra Nevada Mountains?' I have the honor to inform you that I cannot audit any accounts under its provisions, as there is no appropriation of money contained in the Act.

Very Respectfully,
Your obed't serv't,

SAM. BELL,
Controller of State."

On the 8th of September I received the following:

"Fiddletown, September 7th, 1855.

S. H. Marlette, Surveyor-General:

Sir:

Having for a long time expected that some action would be made from your office, in relation to the survey of a Wagon Road across the Sierra Nevada Mountains to Carson Valley, by the way of this place, from the conversation that I had with you in the Spring, at your office, in the presence of Mr. A. R. Jackson, *i. e.*, that when you started out, you would either start from here and return by the way of Placerville, or, *vice versa;* and having been out by the latter route, and not by this, owing to the want of funds being provided, as appears by your card of August 29th, which to us is, so far as you are concerned, entirely satisfactory, this is to request you to come, if you possibly can, early in next week, and

make a preliminary survey of the route, by this place, to intersect the survey made from Placerville, near Leek Springs; or to find if the gap in the mountains at the source of the Mokelumne River, is not more practicable than the one now used on the Placerville Route.

If you will come with the necessary instruments to make the requisite observations, the company will be made up at this place to perform all the other duties connected with it, and the expenses will be defrayed by the citizens.

We wish you to make personal inspection of this route, as we are confident that the one to Placerville will bear no comparison with this, in point of easy grade, shortness, or other facilities, for constructing such road, on such principles as contemplated by the law.

If, however, it should be out of your power to come at so early a period, or at all, we wish you to defer, (if it should not be in your power to make the survey, and report by the 15th of this month,) your report to the Commissioners, until we may have time to make ours to you, which will not be later than the 20th of this month.

This, if you are at Sacramento City, will be presented to you by J. H. Young, Esq., of this place, who will learn from you what may be expected by us.

Very Respectfully Yours,

JONA. PALMER,
On Behalf of the Citizens."

To this it was replied, that I would defer my report until the 20th, as desired; also, that no further explorations were necessary on any route crossing the great western spur or summit of the Sierra Nevada; nor, as the road was represented to be good as far as Leek Springs, did I think any examinations west of the same were necessary, under the Act, as it contemplated no expenditure where the road was then traveled with ordinary ease, and recommended only such explorations as were calculated to avoid the above mentioned spur, as Mr. Goddard would obtain all the information necessary in relation to the route over the same.

On the 12th information was received from Mr. Palmer, that the citizens thought best to let the matter rest, if no location of a road west of the dividing ridge was to be made, as probably the old pass was as good as the one to the south of it would be.

About two weeks had elapsed since the return of the Calaveras exploring party, when, on the 11th of September, I received a communication from David Shepherd, dated the 10th, stating that the party had returned after a three weeks' absence, and had made a report, from which it appeared that they had made a very thorough examination, and that the route from Murphy's must pass through Carson Cañon.

Mr. S. spoke very favorably of the route, and said, "inclosed, I will send you, if I receive in time, the printed report of the expedition, with a map of the route and all the distances."

In a postscript, he says: "I have just received the *Calaveras Chronicle*, and by some means the report of the Exploring Expedition has been omitted. I suppose it will be published this week, and in time for you to see it."

The report was published on the 15th, and on the 20th a copy was obtained.

The report was not signed by Mr. Hall, the West Point Civil Engineer, or by a Surveyor, nor was any reason given for the omission. It was not addressed to the Surveyor-General, and no trouble had been taken to forward a copy to him.

Two reports, fuller than the one above mentioned, upon the Calaveras Route, have since been received, which may be found in Appendices A. and F., for which reason the former one is not transmitted.

On the 20th I laid the above mentioned report, together with that of Mr. Day, before the Board of Commissioners, who adopted the route of the South Fork of the American River, Slippery Ford, Johnson's Pass, Luther's Pass, Hope Valley and Carson Cañon; and, notwithstanding the difficulties encountered in making, or attempting to make, the explorations, I am of the opinion that no better, taking everything into consideration, will be found.

2. THE SURVEY OF THE ROAD.

On the 26th of September the route was selected. On the 27th, the Hon. Sherman Day went to Placerville for the purpose of organizing a party and beginning the survey as soon as the necessary means should be provided; and on the 30th, I went to the same place with a view to hasten, if possible, the furnishing of the means.

It was stated to parties interested that it was the determination of the Commissioners, if possible, to have the road constructed before the expiration of their term of office.

It was stated, also, that in order that the road might be located and estimated speedily so that the above object could be accomplished, it would be necessary to have funds to defray the expenses of the survey, and that it could not be commenced until $3,000 in cash were placed at the disposal of Mr. Day and myself, $500 of which must be under my exclusive control, to enable me properly to cooperate with Mr. Day in carrying forward this important project, and that I would not attempt it at that late day unless the funds were at once provided, as I had already exhausted my own means in furthering this and other matters connected with my office.

I remained until my presence was required at Sacramento, when I returned on the 3d of October, leaving the following instructions with Mr. Day:

"Placerville, Oct. 2. 1855.

Hon. Sherman Day,
Engineer Immigrant Road, etc.

Dear Sir:

So soon as three thousand dollars shall have been placed at your disposal (five hundred of which you will immediately forward to me), you will organize a party and proceed to locate the Immigrant Wagon Road, locating the eastern portion first.

On being informed that the necessary funds are raised, I will forward such other instructions as may be deemed necessary.

I am, very respectfully,
Your obedient servant,

S. H. MARLETTE,
Surveyor-General."

While at Placerville, I found it necessary to borrow money to pay certain of Mr. Day's assistants, employed near that town during the explorations which, together with sums expended before and since in carrying forward this survey,

have not been refunded to me, and form a part of the deficiency to be provided for.

Fearing that so much time would be lost before the commencement of the survey, that in case of an early and severe winter we might not be able to complete the location of the portion of the road on and east of the Sierra before the falling of snow, I sent the following note to Mr. Day:

"Surveyor-General's Office,
Sacramento, Oct. 5, 1855.

Hon. Sherman Day:

Dear Sir:

I hope you will not allow the people of Placerville to trifle with us any longer, but leave on the stage on Monday morning for this place, unless they shall have, prior to that time, enabled you to comply with my request to send me the five hundred dollars; and unless they shall have also, prior to that time, either placed the full amount necessary for the survey at your disposal, or satisfied you that it shall be done on Monday or so soon as you may think necessary.

In no case will you proceed further than you have means furnished you.

On your return, I shall move a reconsideration of our decision and a reference of the whole matter to the Legislature.

You can state this to the people of Placerville, and you may rely on being sustained, for I am heartily disgusted with their trifling.

I am, very respectfully,
Your obedient servant,

S. H. MARLETTE,
Surveyor-General."

Up to the evening of the 6th, but $400 hundred dollars had been raised.

The Board of Supervisors of El Dorado County had also appropriated $1,000, but as the Treasurer was in San Francisco none of this could be had, nor was it known that he would recognize the act as legal.

It was expected that in the course of ten days the Common Council of Placerville would appropriate $2,000 of scrip. So, on being assured that the above was the utmost that could then be done, I consented that Mr. Day should commence the survey.

Mr. Day left on the evening of the 8th with such a party and outfit as $400 cash and $3,000 of *promises* enabled him to oblain. Thus, nearly two weeks were lost.

On the 15th, I received a communication dated the 13th, from a prominent citizen of Placerville, from which I take the following: "Our people, feeling a deep interest in the contemplated Wagon Road, and anxious to commit the State to the completion of it beyond the contingency of the next Legislature, are very solicitous that you should, without further delay, advertise for proposals to construct the road.

If prompt action now directs the Commissioners, I am certain this great enterprise will be forwarded beyond our present anticipations. Much can be done between now and the meeting of the Legislature to open this 'Winter Pass.'"

In the vain hope of allaying the suspicions of the people, and of satisfying

them that we were in earnest in the Wagon Road matter and thereby securing a more hearty co-operation, the desired advertisement was drawn up and published on the 17th, and on the same day I replied to the foregoing that I felt a "lively interest in the contemplated $500," and that I must have the same, giving reasons therefor, and requesting an immediate answer. One month afterward I received what I suppose was intended for an answer, of which I shall speak hereafter.

On the 23d I received a letter from Mr. Day, dated the 18th, in which he said: "I fear we shall not be able to get so easy a grade as we had formerly expected. I fear we shall be so hemmed in by rocks that we cannot do better [in some localities] than six or seven degrees, without going to an expense which the law does not seem to contemplate."

The above was very unwelcome information, seven degrees being about double the grade we had anticipated, and I began to fear that a proper regard for the interests of the State might require that the letting of the contract for the construction of the road should be postponed until other routes should be more thoroughly examined.

About this time, having been informed that the citizens of Calaveras were to hold an Immigrant Wagon Road Convention on the first of November, I concluded I would attend it for the purpose of informing myself of, and perhaps taking part in, the proceedings.

No convention assembled, no notice of the same having been published, so I returned, after having made such suggestions as were calculated, if acted upon, to secure to the Calaveras route proper consideration.

Returning on the 9th of November, I found three communications from Mr. Day, giving a history of the progress of the survey, and placing the subject of grades in a much better light, as he had avoided thus far, all above five degrees; also calling for additional assistance, which it was not in my power to render.

He stated that he had intended to send me a map, a general profile and some minor profiles and plans on an enlarged scale, with details and specifications of drains, culverts, etc., but that on thinking the matter over, he found it would be utterly impossible to attempt it even without a draftsman to remain in the camp all the time; that if he remained in camp and his assistant with him to work up the drawings and calculations, there would be six or seven men idle and eating up provisions and wages, and the fine, clear weather would be passing away.

The amount of work remaining to be done at that time, and the many disadvantages under which it was to be performed, led me to believe it would be unadvisable to continue publishing the advertisement for the reception of proposals for the construction of the road, and at no subsequent time have I considered such publication expedient.

On the 12th of November I wrote to Mr. Day that I had been desirous of helping him along, and of coming to consult with him, on learning that the grades were not so easy as we had anticipated; that I had been of the opinion that at least one other party should be in the field, and each party provided with a draftsman, to keep up the office work, but that it was with diffidence that I ventured to make any suggestions on the matter, as it was virtually beyond my control, as I had received no answer to my communication, and did not know what provisions had been made for defraying the expenses of the survey. I advised him, however, not to lose one moment from his field-work, for I began to fear that he would be prevented from completing the location of the road, which would be a sad termination of our labors.

I stated, also, that the plans and specifications could be made out here; that I saw no prospect of letting the work, so as to accomplish anything towards its

construction of consequence, if at all, during our term of office ; that we could let it, however, when we were ready, (if deemed advisable,) but I did not think we had better do so before ; that I thought we would be ready when the road should be wholly located and estimated, plans and specifications made out, and after this, twenty days' notice given ; and that I doubted the propriety of letting at an earlier day ; that however this might be, I believed in giving contractors a reasonable time to prepare their proposals.

On the same day I received a communication from the Hon. P. C. Rust, of Yuba County, addressed to the Governor and myself, stating that a survey of the "Henness," or "Downieville Route," just completed by D. B. Scott, Esq.,* a gentleman eminent as a skillful engineer, had furnished convincing proof that said route was the most available one that could be selected by the Board of Commissioners, and asking the Board to waive the letting of the contract for a reasonable length of time, say thirty days, to enable their engineer to make out an elaborate report, and a map worthy to accompany the same. It was intimated that the engineer would not proceed unless the extension of time was granted. The communication was accompanied by an epitome of the prospective report, in which Mr. Scott stated that he found it to be unnecessary to adopt any grades exceeding five degrees, between Camptonville and the Big Meadows, and that he thought $50,000 would construct the road between those points.

The epitome constitutes No. 5 of Appendix A. These were immediately laid before the Board, and on the same day I wrote to Mr. R., suggesting that Mr. Scott's estimate be made for a road sixteen feet in width, the same as was contemplated on the selected route, and urging him, if possible, to have the map, report, etc., ready in twenty days. In reply, Mr. Rust informed me he thought that twenty days would suffice.

On the 14th I wrote to him that I was of the opinion we should not be ready to let the work in twenty, or perhaps thirty days, and that after the reception of the map, estimate, etc., I should be ready to take such action as the best interests of the State might demand, and again urged him to press the map, etc., forward to a speedy completion, and stated that he might rely on having impartial justice.

At the next meeting of the Board, the time for the reception of proposals was extended twenty days, in order that the location of the road might be completed, and plans and specifications prepared.

On the 19th of November I wrote to David Shepherd, Esq., of Murphy's, Calaveras County, expressing the opinion that we should not be able to let the road during our term, and recommending that a good engineer be employed to make out as definite and accurate a report of the grades, and estimate of the cost of construction of a road sixteen feet wide, as might be found practicable, which I requested might be addressed and forwarded to me before the 15th of December. Nothing of the kind having been furnished, I have transmitted such reports as have been obtained in other ways. They constitute portions of Appendix A and F.

On the 14th of November I received a communication (dated the 13th,) from Placerville, in which the writer stated that he had understood I had expended $500 on the Immigrant Road, which he would retain in his hands, and refund to me so soon as Mr. Day should sanction it ; that of course Mr. Day, as my deputy, should be consulted in regard to the expenditures. That they were appointed by the Board of Supervisors as viewers, and were jointly responsible for $1,000 placed in their hands by the Board, and for $2,000 of Placerville City Scrip, for defraying the expense of the survey ; that a part of the same, about $900, had been expended ; that after Mr. Day's departure he (not Mr. Day,)

* Mr. Scott's Report and Map have not been received.

had drawn the $1,000 which was still on hand, and that on the return of Mr. Day my matter would be adjusted. I considered the foregoing as uncalled for, as I had presented no bill to be audited by said Viewers.

On the 19th, a communication from Placerville, dated the 18th, arrived, in which it was stated, that after a long time things had got into some tangible form in regard to money matters; that I could draw on Mr. ——— for the $500, which would be paid at any time; that the Supervisors had agreed to make an appropriation when thesurvey should be completed, to pay all expenses; that there would be no further trouble about money matters; also that if I would come up, all my expenses should be paid, etc. On the same day I communicated my reasons for not accepting the above late, but charitable, invitation, as follows:

"Dear Sir:

Your favor of yesterday's date I received this afternoon. I regret that the means necessary to enable me properly to co-operate with Mr. Day in the location of the Wagon Road, were not furnished me as I desired. What excuse or reason your people have for the unwise course they have pursued, I am of course entirely ignorant of, as they have not deigned to make any reply to my requests, since the departure of Mr. Day. By neglecting to furnish me with the necessary funds, they have prevented me from going over the work, and consulting with Mr. Day, and from providing him with such additional assistance as was necessary to prepare the work for an early letting, and thus, if possible, secure its completion before my term shall expire, which you and many others, who should have done everything in your power to assist me, knew was my wish and determination.

How *have* you aided me? In the first place, it was nearly a month before you raised one dollar for the location. When I visited your place, with the vain hope that I might hasten the raising of the necessary funds, what encouragement did I receive? Why, this—I was compelled to borrow money to pay men for assisting Mr. Day in making surveys in the vicinity of Placerville. To pay that money, I came home, drew my salary, and paid it out of that! Has Placerville or El Dorado ever refunded that money? No! Did I not state to you and many others in Placerville, that I had not for months received one dollar from the State for any purpose whatever, connected with my office, except for rent and salary? And did you not know that the salary is not sufficient to defray my personal expenses? Did I not tell you I *must have* $500 immediately, to enable me to relieve myself from debts I had incurred (for the Wagon Road), and were then due, or nearly so? Did I not state in almost every communication to Mr. Day, that I must have $500? Did I not again state in a letter to ———, dated about the middle of last month, that I desired to start the next Tuesday to go over the road in company with the Governor, and several gentlemen who desired to bid for the work? Did I not state that I *must have* the $500 before I went, to place matters in such a condition that I could leave, and to pay the expenses of the trip? Yes, all these things are true! Were these matters considered of sufficient importance to entitle them to an answer? No!

On the 14th of this month I received a letter from Mr. ———, stating that he is informed that I have expended $500 on this Wagon Road, and that he will hold the same in his hands until Mr. Day's return, when if Mr. Day approves it, he (Mr. ———,) will refund that amount. Mr. ——— says: 'Of course Mr. Day, as your deputy, should be consulted in the matter.' I considered the letter an insult, and did not reply to it. I presume yours is not intended as such, and have therefore replied to it.

Mr. ——— closes his letter by saying that when Mr. Day returns (if he approves it,) my 'matter will be arranged.' My 'matter' was, that I wanted $500 many weeks ago, to enable me to aid Mr. Day, and to consult with him in locating the Wagon Road, and preparing it for letting. The time I might have devoted to these objects is past, my whole time being now taken up in performing other official duties."

Shortly after the above was written, I received a call from Mr. Kirk, of Placerville, to whom I suggested that some of the friends of the road had better see Mr. Day, and consult with him on the propriety of obtaining additional assistance, in the form of another party, to run a preliminary line ahead of the locating party, and a draftsman to bring up the office work. The latter suggestion was acted upon.

On the 12th of December, in consequence of learning that Mr. Day had been informed that the Commissioners were expecting to have the estimates, plans and specifications, prior to the second Wednesday in December, I wrote to him that I did not expect any such impossibility; that I considered the immediate completion of the location of the road as the first object; that the estimates, plans and specifications, were next to be attended to, and afterwards the letting of the contracts.

On the same day he transmitted from Slippery Ford, a report of the progress of the survey, and an estimate of the cost of constructing the road from its eastern terminus to that point. One copy I received on the 15th, another had previously been received by the other Commissioners, a fact worth mentioning, inasmuch as there has been an impression that I have retained the specifications and estimates from the other Commissioners. Both copies were transmitted by the same special messenger, by Mr. Day, to Placerville.

On the 31st of December, at the hour at which a meeting of the Board had been called, I placed the following protest in the hands of Hon. Charles H. Hempstead, Secretary of State, since which time I have not attended any meetings of the Board.

3. "PROTEST.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, Dec. 31, 1855.

To his Excellency, JOHN BIGLER, Governor, and Hon. CHAS. H. HEMPSTEAD, Sec. of State of the State of California, and Immigrant Wagon Road Commissioners:

GENTLEMEN:

In compliance with your request, and in accordance with my views of propriety, I have the honor herewith to transmit the accompanying packet, marked 'Proposal,' which has been lying in this office for several days, and which I presume to be a proposal for the construction of the Immigrant Wagon Road. I transmit the same in view of the fact that it appears to be the determination to award the contract, notwithstanding the objections urged by the undersigned.

In transmitting the accompanying 'proposal,' I do not wish to be considered as at all acknowledging that either this or any other proposal is now, or can be properly (under existing circumstances) before the Board, but would most emphatically deny the same; and would further assert that the work cannot be now

let, except in violation of the intentions of the Legislature, as expressed in the Wagon Road Act, and with an utter disregard of the usual manner of letting such works, and without great risk of committing the State to a contract so loosely drawn as to admit of various constructions.

The Wagon Road is *not yet surveyed*, plans and specifications are not yet ready, and until the survey shall have been completed, plans and specifications prepared and ready for exhibition, and notice to this effect published for twenty days, the work cannot be let without giving reasonable cause for complaint. Nor should the twenty days' notice transpire while the ground is so covered with snow as to render it almost impracticable for those desirous of bidding for the work to even go over the route, to say nothing of the impossibility of judging of the character of the work, or of the expense of its construction.

Further, the contract cannot be now let, except by a departure on the part of the Commissioners from the mode of procedure which the published notices would reasonably lead the public to expect. This remark is true not only concerning those that have been published with consent of the undersigned, but also of those that have been published without his knowledge or consent.

My object in presenting in writing, the substance of the verbal objections made on Saturday last, to the action of the majority of the Board, is to prevent any misunderstanding hereafter as to what amount of responsibility attaches to myself in the proposed letting of contracts for the construction of the Wagon Road.

Regretting the necessity for this communication,

I have the honor to be, very respectfully,
Your obd't serv't,

S. H. MARLETTE,
Surveyor-General.

P. S. I beg leave to present the following resolution, as embodying my views as to the action proper to be taken by the Board at this time. It was presented on the 28th inst. at the 'informal' meeting, but failed to pass:

Resolved, that the time for the reception of proposals for the construction of the Immigrant Wagon Road over the Sierra Nevada, be continued until the location of the same; also plans, specifications and estimates shall have been completed, and *twenty days* thereafter.

N. B. The Commissioners reserve to themselves the right to reject, if deemed proper, all proposals.

S. H. M."

NOTE.—In Appendix A No. 2, may be found Mr. Day's Report upon the survey of the road, up to January 7th, 1856. His letter of resignation was received on that day, and the substance of it immediately reported to my successor.

4. OTHER ROADS RECOMMENDED.

It is respectfully recommended that it be made the duty of the Surveyor-General to make such further explorations and surveys of routes for Wagon Roads over the Sierra Nevada as may be deemed necessary by the Board of Wagon Road Commissioners; and to make maps and profiles of said routes, with plans, specifications and estimates of the cost of construction of good Wagon Roads upon the most practicable, to be presented to said Board. To defray the expenses to be thus incurred, I would recommend an appropriation of $15,000.

I would also recommend an appropriation of $150,000, to defray the expense of constructing roads upon such of said routes as may be selected by the Board, the same to be apportioned as the Commissioners may deem most judicious.

The roads might be surveyed and estimated, and the apportionment made public prior to the submitting of the $150,000 appropriation to the people, should such submission be considered necessary.

III. STATE LANDS.

1. SCHOOL LANDS.

The Commissioner of the General Land Office, in his Report of November 30, 1853, estimates the area of this State, exclusive of water surface, at 188,981 square miles, or 120,947,840 acres ;

Of which one-eighteenth (the 16th and 36th sections) has been donated to this State for the support of Schools, equal to acres	6,719,324
For a University, two Townships or, acres	46,080
For Internal Improvements (devoted to the cause of Education by the Constitution of this State)	500,000
Constituting an aggregate of, acres	7,265,404

From which, if judiciously selected and disposed of, may be derived a magnificent fund for the education of the children of California.

From the above amount deduct 232,000 acres, for which School Land Warrants have been sold, and there remain of lands for educational purposes, 7,033,404 acres, to which add 6,400 acres (ten sections) donated for the erection of public buildings ; also the swamp and overflowed lands, and lands subject to overflow at certain seasons of the year to which she is entitled, estimated in my former Report at 5,000,000 acres, and we shall have a total of 12,039,804 acres, or nearly one-tenth of the whole land area as belonging to the State.

The following remarks taken from my former Report are considered applicable now, to some extent :

"Whenever the 16th and 36th sections shall have been taken up, previous to their survey by the General Government, and when they shall fall upon mineral lands, the State must look elsewhere for an equivalent.

Upon the best lands in the State the settlers are far in advance of the Surveyors, and are likely to continue so for some time to come ; and it is clearly apparent that unless judicious measures shall be adopted by the ensuing Legislature for the selection of these lands, so far as it can be done under existing laws of the United States, and unless Congress shall be effectually requested to modify the laws in relation to the subject, California will be a great sufferer, and the *apparently* munificent donation of the General Government will prove to be in reality comparatively worthless."

The last Legislature passed "An Act to provide for the selection of lands donated by the United States to the State of California for the support of common schools and for the erection of public buildings," which authorized and required the Surveyor-General to select such portion of the 500,000 acres as remained unselected ; also to select the quantity of ten entire sections, granted

by Act of Congress for the erection of public buildings ; also lands in lieu of the 16th and 36th sections that might be settled upon prior to survey, or owned by virtue of a valid Spanish grant ; also for the selection of certain school lands for fractional townships.

He was required, also, to obtain from the U. S. Surveyor-General certified copies of the United States township plats, to be used as a guide in the selection of said lands.

To enable him to comply with the requirements of this important Act, not one dollar was appropriated. An attempt toward an appropriation to defray a portion of the expenses to be incurred under the Act, was made, and read as follows : "All necessary expenses incurred in procuring copies of said surveys from the United States Surveyor-General, for the purposes mentioned in this Act, shall be audited and paid by the Controller out of the General Fund."

The Act requires the Surveyor-General to make to the Governor a monthly report of the selections made, accompanied by plats of the lands ; the report to state the quantity, quality, locality and estimated value of the lands. It also requires him to embrace, in his Annual Report, a full statement of the quantity, quality, locality and estimated value of the lands selected, together with plats of the same.

It became necessary for him to make copies of all the United States township plats, obtained from the United States Surveyor-General, to be transmitted to the County Surveyor, whose duty it was made, when called upon, to assist the Surveyor-General in selecting said lands ; yet for the performance of all these things no funds were provided.

Four hundred township plats have been obtained from the U. S. Surveyor-General's Office. Three hundred of these have been copied on tracing paper, and the tracings transmitted to the County Surveyors of the counties in which they respectively belong, as follows :

	No. of Plats.
To the County Surveyor of Colusi	12
" " Humboldt	3
" " Merced	96
" " San Bernardino	4
" " San Francisco	2
" " San Joaquin	5
" " Shasta	5
" " Solano	4
" " Sonoma (in Mendocino)	6
" " Stanislaus	18
" " Tulare	131
" " Yolo	5
Total	*303

Some not having arrived at their destination, duplicates have been forwarded.

All of the above have been acknowledged as received, except those (three,) sent to Humboldt County.

The position of these townships may be seen at once by a glance at the accompanying map, in which may be found (colored,) the three hundred townships, of which plats have been received, and tracings sent. Also one hundred townships, (crossed,) of which the plats have been received, but not copied. The

* Three of the above were sent to both San Joaquin and Stanislaus, they belonging partly in both counties.

tracings sent to the County Surveyors were accompanied by a copy of the Act for the selection of lands, and by instructions, to carefully preserve and use them, in making the selection in accordance with the Act, and with such instructions as had been, or might be forwarded to them. They were informed that of the 500,000 acres granted by Act of Congress of Sept. 4, 1841, there remained to be selected 268,000 acres, and were required to report what portion of this, and of the "ten entire sections," for the erection of public buildings, could be judiciously selected in their respective counties.

They were also required to report what, if any, of the 16th and 36th sections were settled upon, and in most instances were ordered to proceed without delay, to select others in their stead. They were also required to send to this office immediately all the information they could furnish as to the quantity, quality, locality, value, etc., of such lands as were then subject to selection by the State; also all suggestions that would be of service in issuing instructions for guidance in complying with the Act. Except from the Surveyors of Merced and Stanislaus Counties, no returns have been received in compliance with the above requirements. The Surveyor of Merced says, that of the 268,000 acres, "perhaps forty or fifty thousand might be selected to advantage," in his county; and the "whole of the ten entire sections, unless extraordinarily valuable lands, are desired;" also that some of the 16th and 36th sections are settled upon, in some cases the whole, in others a part being taken up.

The Surveyor of Stanislaus says: "There can be selected in this county thirty thousand acres of land, of good quality for farming or grazing." Cannot give present value; "in a few years will be the most desirable in the county."

The Circular of the Commissioner of the General Land Office, requires the selections of the 500,000 acres to "be based upon the official township plats of the public surveys, which are required to be approved by the Surveyor-General, and on file in the local Land Office, at the time of filing the selection." Section 5 reads as follows: "The selecting agent of the State should file in your (the U. S. Register's,) office, an authenticated copy of his letter of appointment, or other satisfactory evidence of his authority."

The following communication will show to what extent I had endeavored to comply; also to what extent I had then succeeded in complying with the above requirements of the Commissioners' Circular, so far as the Middle Land District is concerned:

"State Surveyor-General's Office,
Sacramento, Oct. 18, 1855.

Col. W. W. Gift, Register U. S. Land Office, Benicia:

Dear Sir:

On the 24th of May, and again on the 6th, and still again on the 14th of June last, I had the honor to send to your address, an official communication, and respectfully requested an answer to the same, but as yet have received none. With my first communication I transmitted a certified copy of 'An Act to provide for the selection of lands donated by the United States to the State of California, for the support of Common Schools, and for the erection of Public Buildings,' approved May 7th, 1855, which I expressed a desire to file in your office as evidence of my appointment as the Selecting Agent of the State, as required by Act of Congress.*

I requested certain information, which is very desirable, in order that I may

* Should have been Circular of Commissioner of General Land Office.

properly comply with the duties assigned me by the Legislature. I stated in my communication of June 6th, that any charges for the same would be paid on presentation at this office. I again transmit a copy of the Act of the last Legislature, for the selection of the lands specified, for the purpose of having it *filed* in your office, and would most respectfully request that I may be furnished with *all* the information necessary to enable me to comply with the Act, in accordance with the laws of the United States, or if this cannot be furnished, please inform me at an early day, how, and on what terms it can be obtained, and greatly oblige,

Very respectfully,
Your obedient servant,

S. H. MARLETTE,
State Surveyor-General.

N. B. An examination of the Act will show what kind of information is needed, full as well as I could express it. Please inform me if the Act is *filed*.
S. H. M."

No reply to the above communication has been received.

Finding it impossible to comply with the Act without the co-operation of the U. S. Register, the following communicction was sent to him:

"Surveyor-General's Office,
Sacramento, Dec. 1, 1855.

W. W. Gift, Esq.:

Dear Sir:

You are respectfully solicited to furnish this office with a statement of all the settlements made by pre-emptors upon the 16th and 36th Sections within your District, for the purpose of enabling the State to make selections in lieu thereof, according to Act of Congress.

I am also desirous of your official opinion concerning the right of the State to elect, either to abandon the whole of a section when deprived by a valid settlement of only a portion, or to take the remainder of such section, and select its complement elsewhere. An early answer will oblige,

Respectfully, your obd't serv't,

S. H. MARLETTE,
Surveyor-General.

Per Wm. L. DeWitt."

To this, no answer has been received.

From the Hon. Chas. S. Fairfax, Register of the U. S. Land Office at Marysville, and his Clerk, Chas. A. Keeper, Esq., I have received prompt and courteous replies to my communications, with assurances that they will furnish with pleasure, any desired information pertaining to their office.

Somewhat similar assurances have been received from H. P. Dorsey, Esq., Register of the U. S. Land Office at Los Angeles. I regret to state that Mr.

Dorsey is of the opinion that it is necessary that the selecting agent of the State should file his authority in person; for this I have not found it practicable to do.

As application has been made to the two above named officers, for such information as is deemed necessary, it may reasonably be anticipated that all obstacles preventing the selection of lands, except those arising from a failure to comply with instructions on the part of the County Surveyor will soon be removed.

The obstacles then remaining, can only be removed by the passage of more stringent laws concerning the office of County Surveyor.

On the 10th of August it was found necessary to apply to the U. S. Surveyor-General for information in relation to the selection of these lands. In reply, a communication was received from Col. Ransom, Chief Clerk, to the effect that, as the office was not in possession of the desired information, my communication had been forwarded to the Commissioner of the General Land Office at Washington.

Nothing further has been received.

Up to the 9th of October three hundred township plats had been received at this office, and on that day the U. S. Surveyor-General's bill for the same, properly certified, was presented by Col. Ransom to the Controller and rejected, on the ground that there was no appropriation by law to meet the same.

It was not anticipated, after this rejection, that any more plats would have been received at this office, until after provision should be made to defray the expense; yet one hundred additional plats have been received.

In this connection I beg leave to remark, that the State Surveyor-General is entirely at the mercy of the U. S. Surveyor-General and the U. S. Registers; that he can do but little without their co-oporation, in making a judicious selection of lands for the State.

I would therefore suggest the propriety of making an immediate appropriation to meet present indebtedness; also that the future incumbent of this office should be placed in such a position that he may pay for what he may desire.

It was understood by Col. Ransom, that he was to receive *cash*, or its equivalent, for the plats; I, therefore, recommend, as a matter of justice, that he be paid in cash.

Maps on drawing paper, instead of tracings, were obtained because of their much greater durability, it having been considered highly important to have permanent records of the U. S. Surveys in this office.

This was deemed advisable, particularly as they have been obtained for eight dollars instead of twelve, the latter being the price at which they were offered during the last session of the Legislature.

To defray the expenses to occur under this Act, during the year 1856, I would recommend an appropriation of $5,000.

It will, doubtless, be necessary for the Surveyor-General, during the year, to visit the several land offices, as well as the offices of many of the County Surveyors, to secure a judicious selection of lands. This constitutes an important item in the above estimated expense.

2. RETURNS OF SCHOOL LAND WARRANT LOCATIONS FOR 1855.

ALAMEDA.

Informal.—Nos. 746 and 776 for 160 acres each.

LOS ANGELES.

No. 265 for 320 acres, and 401 for 160 acres.
Previously Returned.—No. 166 for 160 acres from Mendocino; No. 400 for 160 acres from Tuolumne, and No. 666 for 160 acres from Alameda.

SAN DIEGO.

Nos. 61 and 62 for 320 acres each.

SAN JOAQUIN.

Nos. 707 and 708 for 160 acres each.
Relocations.—Nos. 797 and 798 for 160 acres each.
Relocations—Original Returns not Received.—Nos. 1 and 50 for 320 acres each, and 268, 271, 281, 282, 396 and 397 for 160 acres each.
Previously Returned.—Nos. 109 and 110 for 160 acres each from Solano.

There appears to be nothing in the Act to provide for the disposal of the 500,000 acres, to prevent the whole being located by one individual, and several thousand acres have been located by one person; therefore I again recommend such a modification of the law as will prevent this species of monopoly hereafter; also such as will prevent fraudulent locations of School Land Warrants.

3. SWAMP AND OVERFLOWED LANDS.

Returns of the Swamp and Overflowed Land Surveys, received at this Office prior to January 7, 1856.

COUNTIES.	Approved, and Copies sent to Office of Secretary of State.		Not Approved.		TOTAL.	
	No. of Surveys	No. of Acres.	No. of Surveys	No. of Acres.	No. of Surveys	No. of Acres.
Sacramento			3	952·00	3	952·00
San Joaquin	43	11,121·19	2	546·00	45	11,667·19
Solano	2	411·94	28	4,767·55	30	5,179·49
Tulare	4	720·00			4	720·00
Yolo	41	11,520·00	1	160·00	42	11,680·00
Total	90	23,773·13	34	6,425·55	124	30,198·68

All of the above, except the four from Tulare, were accompanied by the affidavit as to the character of the lands, in accordance with the request in my circular of August 25, 1855.

The Act requires these lands to be surveyed by the County Surveyors, "according to instructions from the Surveyor-General of this State, which instructions shall be, as near as practicable, in accordance with the surveys of the public lands of the General Government."

On the 13th of June, such instructions as were deemed necessary were issued, together with a copy of the Act, and transmitted to the County Surveyors.

The questionable shape of the returns received, soon furnished convincing proof of the necessity of more explicit instructions, in which I took occasion to remedy, so far as practicable, what were considered the defects of the Act. They were issued on the 25th of August, and, preceded by an abstract containing the main features of the Act, were ordered to be inserted thirty times in the *State Journal*, twenty times in the *Times and Transcript*, fifteen times in the *Sacramento Union*, twelve times in the *San Joaquin Republican*, and six times in the *California Express*. They may be found in Appendix B.

It is believed that the Act for the sale of the Swamp and Overflowed Lands, is premature and very defective, and that it should have been preceded by "An Act to secure to California the Lands to which she is entitled under the Act of Congress," approved September 28, 1850.

To accomplish this object it is recommended that the State Surveyor-General be authorised to obtain from the U. S. Surveyor-General, all the township plats containing swamp and overflowed lands, or lands subject to overflow, and to transmit tracings of the same to the County Surveyors, whose duty it shall then be to make an approximate estimate of the amount and value of lands belonging to the State, not thus designated by the U. S. Surveyors on the township plats; also an estimate of the expense of making the surveys, and of obtaining the affidavits, necessary to delineate upon the plats the true boundaries of, and to establish the title of the State to, said lands.

It is also recommended that the Surveyor-General be authorized, when deemed expedient, to require such surveys to be made and such affidavits to be taken, by the County Surveyor, or by some other Surveyor, who should be also a civil engineer; and who should be in all respects subordinate to the Surveyor-General, and should furnish him with a map of the lands surveyed, on which should be delineated the boundary of swamp lands, according to the U. S. Surveys; also the true boundary, according to his own surveys; also the boundaries of any of these lands, which parties may be desirous of obtaining from the State, by purchase or otherwise, the expense of the latter being paid by said parties, and their names entered on the maps.

All information the Surveyor-General might demand, or which the Surveyor might deem of importance, should also be furnished, which, together with a complete map of the lands, should be transmitted with his annual report to the Governor.

The Surveyor-General and his deputies should be authorized to administer the oaths necessary in obtaining the affidavits.

To enable the Surveyor-General to comply with the proposed requirements, I would recommend an appropriation of $12,000.

With such maps and information as would thus be obtained, a more judicious system, it is believed, than the present might be devised for the disposal of these lands.

Important data, to serve in part as a basis for a general and judicious system for the reclamation of these lands, could thus be obtained; and the devising of such a system is one of the most important and difficult problems to be solved by the engineering profession of this State.

4. COUNTY BOUNDARIES.

In my former report attention was called to the fact, that the "Act concerning the office of Surveyor-General," requires that officer, "when called upon by the county authorities of any county, to run any boundary line between such county and an adjoining county," and that during the year he had frequently been called upon to make such surveys, but had been unable to do so for the want of an appropriation; also, that a reference to the reports of County Surveyors, would show the necessity of having many of the boundaries run during the coming year, [1855,] and that "independently of this, the necessity of obtaining data for an accurate map of the State would justify considerable expenditure;" and it was recommended that twenty thousand dollars be appropriated for such surveys.

As nothing was appropriated, for the purpose of enabling the Surveyor-General to comply with the requirements of the Act, in this particular, he did not consider himself under any obligations to regard the applications of county authorities for such surveys, but on applying to the Attorney-General for his opinion in the matter, he was informed that he was "bound by law, when called upon by the authorities of any county, to run any bonndary line, etc., and that the claim for such services would be good against the State, but would necessarily require legislative action to secure payment."

The last Legislature passed two special Acts for the survey of county boundaries; one, "An Act to provide for settling the boundary line between the counties of Santa Cruz, Santa Clara and San Francisco," approved May 2d, 1855; the other, "An Act to establish a prominent [permanent] boundary line between the counties of Stanislaus and Tuolumne," approved May 4th, 1855; neither of which contained an appropriation.

The former Act authorized and required the Surveyor-General to survey, or cause to be surveyed, the boundary line between said counties, and to have a copy of the map of said survey deposited in the Clerk's office of each of said counties, and one in the Surveyor-General's office.

The latter Act contained the following: "The Surveyor-General of this State shall, within ninety days after the passage of this Act, survey and mark, (or appoint some suitable person to survey and mark,) the said boundary line, and shall receive such compensation therefor, as may be allowed by law; *provided*, that he file in the offices of the Clerks' of Stanislaus and Tuolumne counties, within thirty days after the completion of said survey, certified copies of said boundary survey, including marks, courses and distances—retaining one copy to be placed on file in the office of the Surveyor-General of this State."

Had there been an appropriation to defray the expense of county boundary surveys, the best topographical engineers would have been employed, whose services could have been obtained for reasonable salaries, in which case this office might now have been in possession of valuable contributions towards a Topographical Map of the State.

In nearly every instance, as a matter of necessity, the County Surveyor of the county whence came the application, has been deputed, under certain conditions, to make these surveys; there having been but few or no instances in which a competent person, not holding that office, was willing to make the surveys.

For the substance of the Appointment and Instructions under which these surveys have usually been made, I respectfully refer to Appendix C.

1. SURVEYS UNDER SPECIAL ACTS.

STANISLAUS AND TUOLUMNE.

Appointment and Instructions issued May 11th. Appointee, Silas Wilcox, County Surveyor of Stanislaus County.

The Act under which the survey was to be made, with which Mr. Wilcox was required to comply fully, was forwarded to him together with the following special instructions: "You will find a monument on Stanislaus River, whence Knight's Ferry bears S. 76° 51′, W. 3,650 feet, near Bearing Tree, marked compass bearing, N. 84° 40′, E. 240 feet, to monument on boundary between Calaveras and San Joaquin counties. This will be your initial point."

The above monument is the corner of Calaveras and San Joaquin counties, to which reference was made in my former report. It is at the terminus of a line beginning at a "point one mile north of Lemon's Ranch," and running *to* the Stanislaus River, *through* a "point one mile north of Knight's Ferry."

The law, in describing the boundary of Calaveras County, defines this corner as a "point one mile north of Knight's Ferry," while in describing San Joaquin it defines it as a "point on the Stanislaus River one mile north of Knight's Ferry." [See Compiled Laws, p. 831.

This corner was established by Mr. Whiting, County Surveyor of San Joaquin, and myself, as County Surveyor of Calaveras. It was the result of a compromise proposed by Mr. Whiting, and acceded to by myself, and agreed to by the Commissioner and Court of Sessions of our respective counties. It satisfies the law, as well as, or better than any other point can, and should therefore be considered as settled. Several communications have been received during the year from San Joaquin, expressing dissatisfaction with the present location, the reply to which was in accordance with the above opinion.

Mr. Wilcox surveyed the boundary between Stanislaus and Tuolumne, the map and field notes of which were received on the 18th of August ; also a statement that he had "made certified copies to file in the offices of the Clerks of said counties, which would be done immediately."

SANTA CRUZ : SANTA CLARA AND SAN FRANCISCO.

Appointment and instructions issued May 29th. Appointee, Thos. W. Wright, County Surveyor of Santa Cruz.

In his annual report, dated Oct. 16th, Mr. W. says : "In compliance with your instructions, I have surveyed and marked the line separating this county from the counties of San Francisco and Santa Clara, and will furnish to your office as soon as practicable a map of the line of survey, and the accompanying field notes. I am now collecting the material for the construction of a county map, and as soon as I can complete it, will likewise transmit you a copy of the same."

Nothing further has been received from Mr. Wright.

2. SURVEYS UNDER GENERAL ACT.

(*Authorized in compliance with calls from County authorities.*)

EL DORADO AND AMADOR.

Application received June 17. Appointment and instructions issued June 22. Appointee, Wm. Henderson, County Surveyor of El Dorado, or Dr. Bradley. Appointment not accepted. Instructions not complied with.

COLUSI AND YOLO.

Application received June 25. Appointment and instructions issued June 26. Appointee, C. D. Semple, County Surveyor of Colusi. Certificates of competency, etc., received Aug. 13. Map and field notes received Oct. 17.

SACRAMENTO AND EL DORADO.

Application received August 10. Appointments and instructions issued August 17.

Appointee, Wm. L. De Witt, County Surveyor of Sacramento County. Map and field notes received Sept. 19.

No accounts having been received, it is presumed Mr. De Witt does not expect compensation from the State.

SIERRA: PLUMAS, YUBA AND NEVADA.

Application received (mislaid and forgotten,) August 16. Appointment and instructions issued Sept. 18.

Appointee, County Surveyor of Sierra, or some other competent Surveyor.

The appointment not having been accepted, on the 10th of October W. G. Still, Ex-Deputy Surveyor of Sierra, was appointed, who is supposed to be now engaged in making the survey.

KLAMATH: HUMBOLDT AND SISKIYOU.

Application received Sept. 16. Appointment and instructions issued Sept. 17.

Appointee, T. P. Robinson, County Surveyor Klamath County.

The application called for the survey of one line, an estimated distance of forty miles, and another an estimated distance of seventeen miles, the expense being estimated at $1,150.

PLACER: SACRAMENTO AND SUTTER.

Application received Oct. 6. Appointment and instructions issued Oct. 8.

Appointee, S. A. Young, County Surveyor of Placer County. Appointment accepted.

TULARE AND LOS ANGELES.

Application received Nov. 17. Appointment and instructions issued Nov. 20.

BUTTE AND YUBA.

Application received Nov. 20, which being embodied in the report of the County Surveyor, escaped observation until the 6th inst., when in a letter to that officer, a disinclination to authorize any surveys at so late a day was expressed, unless the request should be persisted in by the Board of Supervisors.

STANISLAUS AND MERCED.

On the 13th inst., notice was received from the Clerk of the Board of Supervisors of Stanislaus County, that said Board had "ordered that the County Surveyor proceed *instanter*, under instructions from the Surveyor-General, to make a survey of the portion of the boundary between the above named counties, lying between the mouth of the Merced River and a point on the San Joaquin River, seven miles below."

The boundary between these counties should be more plainly defined by statute, before surveyed. I respectfully recommend either an appropriation of $10,000, to enable the Surveyor-General to survey county boundaries, when called upon by the county authorities, or a repeal of the clause making it his duty to make such surveys.

3. INDEFINITE, DISPUTED AND OBJECTIONABLE BOUNDARIES.

The "Act dividing the State into counties and establishing seats of justice therein," and many of the Acts supplementary thereto are very defective, and while many of their defects are important and demand immediate removal, those of less consequence, being neither useful nor ornamental, should be expunged.

The County Surveyors, County Assessors and Boards of Supervisors have been requested to furnish any suggestions for the improvement of the boundaries of their respective counties by substituting natural for artificial [arbitrary] ones, or the lines of the United States Surveys for the present lines, or any other changes with a view to a better and more permanent subdivision of the State.

The importance of the subject has induced me, in some cases, to condense their suggestions, in others to refer to the reports in which their suggestions may be found; also to present such remarks, as from the examination I have been able to give the subject, appear to be judicious.

ALAMEDA.

The County Surveyor says, that as at present defined, it would be almost impossible to run the boundaries except by agreement. He quotes the description, points out its objectionable features, and suggests that some action should be taken in this matter as soon as possible, and the boundary established.

[See Reports of Surveyors of Alameda, San Joaquin and Santa Clara; also Statutes Cal. 4th Session, p. 56, 1853.]

AMADOR.

The Assessor of El Dorado points out very objectionable features in the present boundary between Amador and El Dorado. He says it crosses the Cosumnes River four times within the distance of eight miles; also, that the river would have been a far better boundary, which is undoubtedly true.

He recommends, however, the substitution of Dry Creek, and says the people prefer it. [See Report; also Stat. Cal. 6th Session, p. 113, 1855.]

BUTTE.

A dispute exists between Butte and Yuba as to whether the North or the South Fork of the Honcut is the boundary. The Surveyor and Assessor of Butte contend for the South, and the Assessor of Yuba for the North Fork. Butte appears to have the best of the argument. [See Reports; also Stat. Cal. 4th Session, p. 53, 1853.]

COLUSI.

The Surveyor proposes great changes. [See Report.]

EL DORADO.

See Assessor's Report; also Amador.

LOS ANGELES.

The Surveyor of Los Angeles and the Assessor of Tulare differ materially as to the definitiveness of the boundary between the two counties. [See Reports; also Stat. Cal. 3d Session, p. 240, 1852.]

MARIN.

The Assessor recommends the immediate survey of the only arbitrary boundary to this county, (the Surveyor estimates its length at twelve miles), and says much trouble has arisen and more will arise if it be not surveyed.

MERCED.

The Surveyor proposes a change of boundary; says the present one between Merced and Mariposa is a road very crooked, and changes perhaps every three months.

NEVADA.

The Surveyor proposes and gives reasons for a change in the boundary. [See Report; also Report of Assessor of Sierra.]

SAN DIEGO.

The County Surveyor, Charles H. Poole, has furnished an interesting article upon "County Boundaries" in his Report, to which I would refer.

SAN JOAQUIN.

The Surveyor says that about the position, upon the ground of the line between San Joaquin and Alameda, there is great difference of opinion, and that the line should be run and proper monuments set up. [See Report; also Report of Surveyor of Alameda.]

SAN LUIS OBISPO.

The Surveyor proposes to annex about half of Santa Barbara County; proposes also a change in the northern boundary.

SANTA CLARA.

The Surveyor says it is important that thirty miles of the north-eastern boundary should be run during the ensuing year, and estimates the expense at $30 per mile.

SIERRA.

The Assessor says the boundaries are not sufficiently defined; that the statute calls for a line that does not exist, etc. [See Report.]

SOLANO.

The Surveyor proposes important changes; if made, only thirty miles of boundary require to be run. Suggestions approved in part by the Surveyor of Yolo. [See Reports.]

SUTTER.

The Surveyor proposes important changes. [See Report.]

4. OTHER DEFECTS OF, AND PROPOSED AMENDMENTS TO, THE SEVERAL ACTS DEFINING COUNTY BOUNDARIES.

NOTE.—The portions considered objectionable are inclosed in parentheses; those proposed to be inserted are inclosed in brackets.

CONTRA COSTA,

Appears very defective, but I am unable to suggest the proper amendments.

EL DORADO.

"Thence in a due east (erly) direction to the boundary of the State." Comp. L. p. 832.

HUMBOLDT.

"Thence north" [erly] "to the point of beginning." Stat. Cal. 4th Session, p. 161, 1853.

KLAMATH.

"Thence (due) north" [easterly] "along (said)" [the north] "western boundary of Trinity County." Stat. Cal. 6th Session, p. 200.

LOS ANGELES.

"At a point (parallel)" [in line] "with the northern boundary of the rancho, called Malaga, and (opposite to)" [in line with] "the (southern)" [northern] "boundary of the rancho called Malaga." Comp. L. p. 828.

MARIN.

"Parallel with the coast to" [a point opposite to, and three miles from, the place of beginning; thence] "to the place of beginning." Stat. Cal. 5th Session, p. 121.

MONTEREY.

"And thence parallel with the coast to" [a point three miles west of] "the place of beginning," [thence east to the place of beginning.] Comp. L. p. 829.

NAPA.

"A point (parellel)" [in line] "with the Southern boundary line of the Rancho," etc., "to a point on the top of said mountains, (one mile east of the eastern boundary line) of the rancho known as Fitch's Rancho, on Russian River."

NOTE.—The center or some other point in the "eastern boundary line," should be designated. Stat. Cal. 6th Session, p. 77, 1853.

NEVADA.

"Thence east (erly) in a straight line," "thence west (erly) on the northerly line of Placer County." Stat. Cal. 3d Session, p 191, 1852.

PLACER.

"To a point ten miles" [by the river] or [in a direct line] "between the junction of Sacramento and Feather Rivers." Comp. L. p. 832.

SACRAMENTO.

"Beginning at a point ten miles due north of the" [mouth of] or some other point in the] "American river," "to a point on the Cosumnes River, eight miles" [in a direct line] "above the house of Wm. Daylor." Comp. L. p. 830.

SANTA BARBARA.

"Thence north-east" [erly] "to summit of the Coast Range." Comp. L. p. 828.

SHASTA.

"Thence along the southern boundary line of Siskiyou County in an east (erly) direction."

SIERRA.

"Ten miles" [by the river] "from its mouth," "running thence in a north (westerly) [erly] direction," "thence (westerly)" [northerly] "to a point on the dividing ridge," ("thence northerly following out said ridge,") "thence east (erly) in a straight line," "thence west" [erly] "following the northerly line of Nevada County." Stat. Cal. 3d Session, p. 231, 1852.

SISKIYOU.

"And (from) thence" [south] "across Klamath river," [thence] "running in a south-easterly course along the summit," etc. Stat. Cal. 3d Session, p. 233, 1852.

STANISLAUS.

"Continuing the same (parallel) direction." Stat. Cal. 6th Session, p 245.

SUTTER.

"Beginning at a point in the middle of the Sacramento River, ten miles" [[in a direct line] or [by the river]] "below the junction of the Sacramento and Feather Rivers." Stat. Cal. 5th Session, p. 26, 1854.

TUOLUMNE.

"And following in (an)" [a north] "easterly direction," "thence in a (north)" [south] "easterly direction," "thence following the top of said ridge down to the plains," [[thence to a point in the San Joaquin River, seven miles, [in a direct line] or [by the river]] "below the mouth of Merced River." Comp. L. p. 832.

NOTE.—This last description mostly belongs now to Stanislaus County.

YOLO.

"Point due west from a point in the Sacramento River, ten miles" [in a direct line] "below the head of Sycamore Slough." Comp. L. p. 836.

YUBA.

"East" [erly] "up the middle of said creek," "ten miles" [by the river] "from its mouth," "thence east (erly) in a straight line," thence west (erly) to the said dividing ridge. Comp. L. p. 833.

NOTE.—The latter two errors now affect Sierra instead of Yuba.

PLACER—SUTTER.

The statute defines the south-western corner of Placer, as a "point ten miles below the junction of Sacramento and Feather Rivers;" and the most southerly corner of Sutter, as a "point in the middle of Sacramento River, ten miles below the junction of the Sacramento and Feather Rivers."

SACRAMENTO—EL DORADO.

It defines one corner of Sacramento, which belongs also to El Dorado, as a "point on the Cosumnes River, eight miles above the house of Wm. Daylor."

SIERRA—YUBA.

Also, one corner common to Sierra and Yuba, as a point ten miles from the mouth of the Middle Branch of the Yuba River.

YOLO—COLUSI.

And one corner of Yolo, belonging also to Colusi, as a "point in the Sacramento River, ten miles below the head of Sycamore Slough."

In the above four cases, and in all similar ones, (except there be evidence that the Legislature intended otherwise,) I should decide that the most natural mode of complying with the statutes, would be by measuring the respective distances by the river. I am satisfied, however, that this would be an injudicious decision in the case of Sacramento and El Dorado.

I am informed that more than three years since, the County Surveyor of Sacramento, under instructions from the late Surveyor-General, Wm. M. Eddy, Esq., located the point on the Cosumnes River, by running eight miles in a direct line from Wm. Daylor's house, since which time, I am informed, Sacramento has exercised jurisdiction accordingly. At the same time the common corner of El Dorado, Sacramento, Calaveras and San Joaquin, which was a point on Dry Creek, due south of the point on the Cosumnes, was located, and was afterwards used by Mr. Whiting and myself as the initial point for our survey of the boundary between San Joaquin and Calaveras, I protesting against the decision, but being obliged to submit. To change this point now, would be to change the boundary between Sacramento and Amador, and between Calaveras and San Joaquin.

For the above reasons I did not, when authorizing Mr. De Witt to survey the boundary between Sacramento and El Dorado, deem it judicious to reverse the decision of my predecessor.

The point in the Sacramento River, ten miles below the head of "Sycamore Slough," was located by the Surveyor of Colusi, by running ten miles below in a direct line, and he says that the same is in accordance with the statute, as understood by both the people and the authorities of the counties interested, and gives general satisfaction.

The same ambiguity exist in section sixth of the "Act concerning Public Ferries and Toll Briges," approved April 28, 1855. See St. Cal., 6 S. p. 183, 1855.

I would recommend an explanatory Act, defining what construction shall be put upon the phrases in question.

V. COUNTY ROADS.

In my former report the opinion was expressed that "a good common road system was certainly not one of the least desirable objects to be attained by judicious legislation;" also, that this State was not then in possession of such a system, and with a view to aid in the attainment of the desired object, certain suggestions were submitted, a part of which found sufficient favor with the last Legislature to be embodied in the "Act concerning Roads and Highways," and all have been "heartily indorsed" by one at least of the best authorities in the Atlantic States, and it is believed have been generally approved, so far as examined by those in this State most competent to judge of their merits.

On attempting to devise a system for the location and construction of roads, the first question that naturally arises is, how shall means be raised to defray the necessary expense? With a view to answer this important question, I remarked: "The attempt to construct roads wholly by a poll-tax of labor, is inexpedient and unjust, and in this and other States, has resulted in miserable failures. I recommend that it be abolished, and a poll-tax of money substituted; and as the value of property is increased by improving roads, I would also recommend a property tax, to raise a fund to be expended wholly in laying out and constructing roads and bridges."

These suggestions met with the approval of the last Legislature, and are em-

bodied in the "Act concerning Roads and Highways," now in force in this State. Thus has been expunged from our statute book the poll-tax of labor, which has for so long a time in some of the Atlantic States rendered road-making (so called,) a ridiculous, but not harmless farce. The former was wholly a poll-tax of labor, the present is both poll and property tax in money. This is truly a great improvement, but we should advance a little further. Section six of the "Act concerning Roads and Highways," reads thus: "The Boards of Supervisors shall have power to levy a road-tax on all able-bodied men between the ages of twenty-one and fifty years, which shall not exceed *four dollars* per annum, and a property tax which shall not exceed *fivec cnts* on each one hundred dollars, for road purposes," etc.

In the above apportionment, property does not bear its just proportion of the expense of constructing roads, and it is believed to be injudicious to leave the Supervisors to determine the amount to be collected for road purposes. It is therefore recommended that this section be so modified that a poll tax of *two dollars* shall be levied on all able-bodied men between the above named ages, and a property tax of *twenty cents* on each one hundred dollars, to be expended wholly in laying out and constructing roads and bridges. Property is the source whence the greater portion of the road tax should be derived, and it is fully believed that its increase in value, and the decrease in the expense of one year's traffic, consequent upon the improvement of roads, would, if judiciously expended, more than equal the expense of constructing good roads wherever needed throughout the State. No tax should be paid more willingly than that for roads, and none will return more abundant rewards to the tax-payer, under a good road system, and this can be seen by every one after a road has been properly constructed, yet few taxes have been paid less willingly, and few have been expended less judiciously than the road tax ; and this, too, can be seen by most of those who have traveled extensively in this and other States.

How, then, shall we secure a judicious expenditure of the money raised ? By having the roads properly laid out and properly constructed. They are laid out properly, when upon the shortest, most level, and most economical route, in a word, upon the *best route*, all things considered, but to consider all things, and select the best, in the location of a *common road*, is by no means the easy matter that many suppose. Dr. Lardner says: "I do not know that I could suggest any one problem to be proposed to an engineer, which would require a greater exertion of scientific skill and practical knowlege, than laying out a road."

In my former report it was suggested that roads should be laid out, in all cases, by skillful civil engineers, and not by them without a survey embracing the taking of levels, as well as the courses and distances; also, that none but civil engineers should be eligible to the office of County Surveyor, after the expiration of the term of office of present incumbents; that no man was competent to select the best possible route for a common road without the use of a leveling instrument of some kind, for the reason that a change of grade so slight as scarcely to be perceived by the unaided eye, may increase or diminish the force of traction fifty per cent.

Few, if any, who have not examined the subject professionally, are fully aware of the great advantage of easy grades.

The following *data* I extract from "Gillespie's Manual of Road-Making;" a work that has received the highest commendations from the best authorities in the Atlantic States, and the substance of which should be in the hands and *head* of every one who attempts to lay out and construct roads:

Calling the load which a horse can draw on a level					1·00
On a rise 1 in 100, a horse can draw only					*·90
"	"	50,	"	"	*·81
"	"	44,	"	"	·75
"	"	40,	"	"	†·72
"	"	30,	"	"	†·64
"	"	26,	"	"	†·54
"	"	24,	"	"	·50
"	"	20,	"	"	†·40
"	"	10,	"	"	*·25

Thus we see that on a grade of 1 in 44, a horse can draw but three-quarters as much as he can upon a level; on a slope of 1 in 30, less than two-thirds; on a slope of 1 in 24, only one-half; and on a slope of 1 in 10, only one-quarter as much.

As the above data have been established by experiment, they cannot be reasonably questioned.

The question of grades is but one of many that must be considered in laying out roads, and to say that a skillful civil engineer is the most competent to discuss and decide these questions, is a proposition that should be doubted by those only who doubt that a skillful military man is the most competent to command an army; a skillful physician and surgeon to take charge of a hospital; a man learned in the law for a judge; or a good blacksmith to shoe horses.

Yet, the "Act concerning Roads and Highways," passed by the last Legislature, is based upon the opposite proposition; Section 9, requiring the "Board of Supervisors of each county, on presentation of petition, praying for a county road to be laid out within the county, if they shall be of the opinion that such road is necessary, to appoint two persons as Viewers to view out and locate said road; and upon a return of the certificate of the Viewers, to declare the same to be a public highway." It says, that "When absolutely necessary, the County Surveyor may be called in by the Supervisors, to assist in said location."

I respectfully recommend such modification of Section 9, as will *require* the services of the County Surveyor in all cases, except those in which that officer is not a civil engineer, in which cases one who is an engineer should be appointed.

Under the present system, viewers are appointed who know nothing of the business they attempt, and have no professional reputation to lose, and who wish the road to run where it will benefit them—instead of the public, and the consequence is, that California is cursed with many public highways laid out and partially constructed (at an expense sufficient to have laid out and constructed good roads on the proper routes) on routes, where good roads never can be made, and therefore must be ultimately abandoned.

In my former Report it was suggested, that the County-Surveyor and Engineer should have the general supervision of the roads in the county, and should as early as practicable make out an apportionment of the Road Fund on a proper basis, reserving a part of said fund for contingencies, which apportionment should be submitted for the approval of the Board of Supervisors; that the County Surveyor and Engineer should lay out all new roads, make maps and profiles of the same, also plans for bridges, etc., and an estimate of the cost of construction, and of the amount of traffic; and that, with a view to the improvement of the routes, all the roads in the county should be surveyed as soon as practicable; also, that the County Surveyor and Engineer, after his plans and specifications shall have been approved, [by the Board of Supervisors,] should proceed as soon as practicable, under proper restrictions, to effect the proposed improvements. It was

* Gayffier. † Parnell.

also suggested, that works involving considerable expenditure, might be most economically constructed under the contract system, and that in all cases the work should be constructed in accordance with the specifications, and to the acceptance of the engineer.

It was also recommended that all the plans, profiles, specifications, estimates, etc., as well as the actual cost of construction, by items ; also the maps, made on some convenient scale, designated by the Surveyor-General, to secure uniformity, embracing the topography of as much of the surrounding country as circumstances would permit, should be forwarded to this office ; and it was remarked that from data thus obtained, and those to be obtained from the survey of county boundaries, also from the United States surveys and other sources, an accurate map of the State could be compiled at no very distant day.

In view of the disposition exhibited to reduce the salaries and fees of all those offices which require in their incumbents scientific knowledge and practical skill that can only be acquired by many years of theoretical and practical training, it was suggested that the compensation should be such as to induce skillful engineers to desire the office of County Surveyor and Engineer, and that none should be required to render services without a fair remuneration ; for it is in vain for a State or county to expect the services of competent and honest men at rates far below those which may be obtained from individuals, and concluded thus : " Feeling confident that the proposed system would be a great improvement upon the present one, the only argument in favor of which, so far as I am aware, is, that it has been very extensively adopted, but never with good results, I present the same, anxiously hoping it may be adopted."

My confidence in the proposed system is undiminished, and I would again commend it for consideration, being well assured that until it shall have been substantially adopted, our roads will not be what they should be. I would refer to remarks upon this subject in the reports of the County Surveyors of Butte, Marin, San Joaquin, Santa Clara, Santa Cruz and Shasta Counties.

VI. MAP OF THE STATE.

I have had occasion previously to remark, that the official map of California is comparatively worthless, in consequence of its great inaccuracy, and to recommend certain measures by which a better one might be obtained. To discuss the necessity of having an accurate map of the State, would be to insult the understanding of every intelligent man. I have therefore considered it a self-evident proposition. Under the head of " County Roads," and of " County Boundaries," may be found some suggestions concerning a State Map.

I would repeat the recommendation, that Railroad and Wagon Road Companies be required to send to this office maps of their respective roads, made on such scale as the Surveyor-General may designate, which shall exhibit accurately the topography of the adjoining country. For some valuable remarks upon a State Map, I would respectfully refer to the Report of Hon. Sherman Day, Chairman of the Senate Committee on Public Lands, of the last session, Doc. No. 17, App. to Senate Journal. I would also refer to remarks upon the same subject by Chas. H. Poole, County Surveyor of San Diego County, in his valuable Report of this year, which may be found in Appendix D.

1. GEORGE H. GODDARD'S TOPOGRAPHICAL MAP.

Geo. H. Goddard, Civil Engineer, has compiled a Topographical Map of the State of California, and of the Great Basin of Utah, with a portion of New Mexico ; also the Gadsden Purchase ; containing, in fact, all that is absolutely known of this portion of Western America, from the Rocky Mountains to the Pacific Ocean. The California portion of the map is based upon the United States' Land Surveys, and contains all the information obtainable from that source up to the present time. The coast line is from the U. S. Coast Survey. The results of the U. S. Explorations by Fremont, Emory, Stansbury, Sitgreaves and Marcy ; of the Boundary Surveys between the United States and Mexico ; of the late Railroad Explorations of Williamson, Whipple, Gunnison, Beckwith and Park ; of the several surveys furnished by County Surveyors and others ; of the Northern Boundary Survey by Mr. Robinson, under instructions from this office ; of Mr. Goddard's own surveys in Mariposa, Tuolumne, Calaveras and El Dorado Counties ; and of his explorations under Lieut. Moore, U. S. A., in the southern portion of the Great Basin for the San Francisco Railroad Committee, all are embodied in Mr. G.'s Map.

It will contain also, the results of the recent Eastern Boundary Survey made by Mr. Goddard, and of the Immigrant Wagon Road Explorations and Surveys made by Messrs. Day & Goddard, under instructions from this office, during the past season.

The Map is left blank in those portions which have not been surveyed or explored, so that additional information can be inserted from time to time as obtained.

This Map should be in the Surveyor-General's office of this State, containing, as it does, so far as possessed, precisely the information needed by that officer to enable him properly to carry forward such further explorations and surveys as will doubtless be ordered for the location of other immigrant wagon roads, and such as should be ordered for the purpose of testing the practicability of the various Passes in the Sierra Nevada for a railroad.

One important object of procuring the services of Mr. Goddard during the past season, was the securing the use of his Map in this office.

Mr. Goddard will dispose of his Map for $2,000 in cash—the same price at which it was offered to the last Legislature, although it contains much, and will contain still more, additional matter.

I would most respectfully and urgently recommend its purchase by the State, and I am fully satisfied that nowhere else can so complete, accurate and extensive a Map be obtained.

VII. STATISTICS.

1. REPORTS FROM COUNTY SURVEYORS.

In my former Report I called attention to the fact, that reports had been received from but nineteen County Surveyors, for the year 1854.

The same number has been received for the year 1855. For the year 1853, my predecessor received but three.

List of County Surveyors from whom Reports have been received for the year 1855.

H. A. Higley,	County	Surveyor of	Alameda.
J. W. Scott,	"	"	Butte.
C. D. Semple,	"	"	Colusi.
Henry Hancock,	"	"	Los Angeles.
A. D. Easkoot,	"	"	Marin.
Erastus Kelsey,	"	"	Merced.
John Day	"	"	Nevada.
J. C. Church,	"	"	Plumas.
Arvin M. Stoddard,	"	"	San Bernardino.
Chas. H. Poole,	"	"	San Diego.
J. J. Gardiner,	"	"	San Francisco.
Geo. E. Drew,	"	"	San Joaquin.
Lucien B. Healy,	"	"	Santa Clara.
Thos. W. Wright,	"	"	Santa Cruz.
A. H. Stout,	"	"	Shasta.
E. M. Stevens,	"	"	Siskiyou.
H. Patton,	"	"	Solano.
Phil. E. Drischer,	"	"	Sutter.
William Minis,	"	"	Yolo.

The above, together with one (for 1854) received from Daniel Small, County Surveyor of Contra Costa, may be found in Appendix D.

The following remarks, from my former Report, I again commend as worthy of consideration:

"Nearly all of the above named reports contain valuable information or suggestions, yet for the labor expended in obtaining this information, County Surveyors are allowed no compensation, which, in my opinion, is neither just nor expedient. It is, therefore, respectfully recommended that the laws be so modified that they may receive reasonable compensation for all services rendered by them; also, that such penalties be affixed as will insure a faithful performance of all their duties.

I respectfully recommend that the County Surveyors be required to make such meteorological observations as the Surveyor-General may consider requisite, and keep a record of the same, a copy of which shall be sent to this office.

By special Acts, some of the County Surveyors are now provided with offices, while others are not. It is recommended that all be supplied at the expense of the counties."

I might particularize many of these reports, but must content myself with mentioning that of Chas. H. Poole, Esq., County Surveyor of San Diego County, which is the longest and the best.

I would recommend an appropriation of $4,000, to be used by the Surveyor-General in obtaining a set of Meteorological Instruments for each County Surveyor in the State, to be used by the latter under instructions from the former.

I am informed that sets of the best kind, such as are manufactured for the Smithsonian Institute, by Mr. Green, of New York, can be obtained for about $70 cash.

Should the above suggestions be adopted, and a worthy prize be offered for the best essay upon the Meteorology, and one for the best Meteorological tables, of California, I do not doubt that this State might present a contribution to this science of great value, and of which she might be justly proud.

It is little she has heretofore done to advance this or any other science—scarcely sufficient to justify her, (except to her own citizens,) in claiming that her population is more enlightened and intelligent than that of any other State or Nation.

2. REPORTS FROM COUNTY ASSESSORS.

List of County Assessors from whom Reports have been received for the year 1855.

C. C. Breyfogle, (per R. P. Ranney, Dep.,)	County	Assessor of	Alameda.
H. A. Eichelberger,	"	"	Amador.
Miles Chapin,	"	"	Butte.
A. W. Dunn,	"	"	Colusi.
J. McKnight,	"	"	El Dorado.
A. F. Coronel,	"	"	Los Angeles.
Warren Dutton,	"	"	Marin.
John Cobb,	"	"	Napa.
John McCoy,	"	"	Nevada.
A. S. Smith,	"	"	Placer.
Christ. Porter, (by M. R. Streeter, Dep.,)	"	"	Plumas.
H. J. Bidleman,	"	"	Sacramento.
V. Johnson Herring,	"	"	San Bernardino.
E. B. Pendleton,	"	"	San Diego.
S. A. Hurlburt,	"	"	San Joaquin.
S. A. Pollard, Dep.	"	"	San Luis Obispo.
J. H. Morgan,	"	"	Santa Clara.
John F. Pinkham,	"	"	Santa Cruz.
Wm. S. Hughes,	"	"	Shasta.
Francis M. Proctor,	"	"	Sierra.
H. B. Ammons,	"	"	Solano.
Smith D. Towne,	"	"	Sonoma.
E. B. Beard,	"	"	Stanislaus.
D. H. Durkee,	"	"	Sutter.
D. W. Potter,	"	"	Trinity.
J. B. Hatch,	"	"	Tulare.
D. P. Diggs,	"	"	Yolo.
Mix. Smith,	"	"	Yuba.

My predecessor received but two reports from County Assessors for the year 1853. For the year 1854 eleven were received, while for 1855 twenty-eight have been received, all of which may be found in Appendix E.

The character of the reports is still more improved than the number, as may be seen by the most cursory glance, but which nothing will render so apparent as a comparison of the statistical table and notes in this Report, with those in my former one.

In that Report I remarked as follows:

"I know of no reasonable excuse for a failure on the part of County Assessors to comply with the present laws in regard to the collection of statistics for this office.

I respectfully recommend that it may be made unlawful to audit or settle their accounts, until they declare on oath that they have complied in this respect, to the best of their ability, with the Statutes."

As the above suggestion met with no favor from the last Legislature, I was induced to send circulars to the Boards of Supervisors of the State, in which they were urgently requested to co-operate with me in effecting a strict compliance with the law, in regard to the collecting and sending in of statistics.

Some of the Boards have complied, but others, I am informed, refused to allow any compensation for the above purpose.

In view of the importance of having correct statistics from the whole State, I would repeat the recommendation quoted above, as well as the following:

"I would also recommend that Railroad Corporations be required to report to this office, as in the State of New York, the amount of stock, debts, cost of construction and equipments, the amount of business, both passengers and freight, cost of maintenance of road-way, of repairs of machinery, of operating, their earnings, receipts and payments; number, kind and cause of accidents; and all other useful information which the State may with propriety demand.

Analogous requirements, varied to suit the nature of the cases, might be made of Wagon Road and Telegraph Companies.

With such changes in the present laws as are recommended, this office may in a short time, with trifling expense, become a storehouse of information of great value to the people of this State, and of great use to those whose province it is to make our laws."

3. REPORTS FROM OTHERS.

To Wm. Patton, Civil Engineer of Calaveras, I am indebted for all the statistics obtained from that county. His report, to which I would call attention, constitutes Appendix F.

To Mix Smith, Esq., the Assessor of Yuba County, I am indebted for a valuable and interesting contribution from Beach & Shepard, upon the "New England Nursery." It constitutes Appendix G.

I had received an interesting communication from Wm. S. Watson, Civil Engineer, upon "Mining Canals and Ditches," from which a few notes have been taken, but as the communication has been unfortunately mislaid, I am unable to transmit it.

In compiling, with no small amount of labor, the following statistical table and notes, I have thought proper to confine myself, almost exclusively, to the information received officially.

Should it be thought advisable to have the census taken during the year 1856, I would earnestly recommend that the duty be imposed upon the Assessors, in which case, the additional expense incurred would be comparatively small.

I had made a list of the Assessors' Reports deserving special commendation, but omit it because of its length.

4. STATISTICAL TABLE.

STATISTICS COMPILED FROM REPORTS OF COUNTY SUR

AGRICULTURAL PRODUCTS.. LIVE STOCK

COUNTIES.	Acres of Land Cultivated.	Wheat.		Barley.		Oats.		Corn.		Potatoes.		Acres in Vegetables.	Hay.		Pounds of Wool.	Pounds of Butter.	Pounds of Cheese.	Horses.	Mules.	Asses.	Oxen.	Cows.
		Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.		Acres.	Tons.								
Alameda	54,724	21,938	460,000	13,704	753,720	9,637	481,850	412	16,480	4,514	338,450	2,175	2,700	..	24,918	133,390	109,000	4,132	945	50	1,034	3,432
Amador	4,329	1,000	26,980	1,195	29,375	828	18,740	..	..	..	..	300	1,200	1,700	..	..	..	535	175	88	453	630
Butte	..	1,865	46,625	2,400	72,000	175	5,250	18	..	..	..	..	..	..	..	..	..	1,588	376	27	..	..
Colusi	12,267	6,500	101,050	5,287	94,066	73	1,600	..	..	..	..	125	..	2,700	..	..	..	1,604	262	..	930	1,748
El Dorado	..	450	11,700	340	9,520	387	9,765	..	..	..	..	..	1,750	2,187	..	..	..	907	384	65	630	769
Los Angeles	23,000	..	17,833	..	..	..	1,566	..	59,168	..	11,166	..	..	1,300	50,000	..	..	19,840	1,293	260	1,546	2,146
Marin	..	2,499	..	744	..	894	..	..	..	859	..	..	..	..	..	..	..	3,522	..	..	..	..
Napa	15,000	11,058	132,696	1,584	31,680	770	..	488	..	61	..	224	..	4,563	11,127	58,310	17,537	4,114	290	..	3,616	3,093
Nevada	4,300	1,100	..	1,900	..	350	..	50	..	300	..	300	700	..	..	..	..	11,500	..	..	..	..
Plumas	..	..	5,765	..	854	..	1,015	..	5	..	2,630	..	..	1,500	..	2,000	..	1441	..	65	..	..
Sacramento	..	5,191	129,775	5,447	163,410	1,547	..	204	..	303	..	996	..	5,207	..	56,136	49,940	1,906	231	11	..	4,860
San Bernardino	..	..	12,000	..	16,200	..	..	..	2,300	..	..	..	..	..	..	..	..	1,356	121	..	..	..
San Diego	..	..	3,000	..	13,000	..	..	..	15,000	..	..	..	..	300	..	..	..	3,650	200	..	300	..
San Joaquin	..	10,197	198,841	11,549	346,470	1,388	47,712	118	4,130	27	1,350	..	2,000	..	..	..	..	3,911	1,146	30	..	..
San Luis Obispo	..	300	6,000	..	3,000	..	..	..	2,000	..	5,000	..	..	..	4,000	2,000	2,000	3,000	200	50	200	1,000
Santa Clara	25,975	20,000	240,000	3,000	75,000	2,000	66,000	300	6,000	300	15,000	..	4,670	4,670	..	..	..	5,650	433	73	1,621	4,050
Santa Cruz	..	4,000	30,000	1,800	54,000	1,200	14,000	90	3,150	500	15,000	..	..	..	..	2,000	..	1,375	175	..	700	1,000
Shasta	..	2,898	65,378	2,995	74,885	239	4,356	203	5,143	142	14,750	..	..	1,764	..	..	..	730	1,037	35	1,086	837
Sierra	318	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	89	958	27	..	214
Siskiyou	7,950	3,000	60,000	1,200	24,000	1,500	37,500	250	..	600	60,000	1,400	..	..	..	..	..	1,000	2,500	..	..	..
Solano	16,107	7,264	..	5,203	..	721	..	724	..	..	..	..	..	5,575	..	..	..	2,945	278	..	..	..
Sonoma *	22,400	13,233	77,000	1,561	49,952	3,268	98,040	714	28,560	1,693	..	..	..	800	14,500	..	..	4,958	323	5	2,771	7,925
Stanislaus	6,989	3,684	55,260	2,231	44,620	429	..	147	..	..	..	500	..	1,500	..	..	..	1,210	..	..	..	..
Sutter	..	..	13,800	..	314,080	..	1,207	..	..	..	21,100	..	..	..	..	7,180	30,000	1,200	607	..	..	..
Trinity	2,900	848	..	655	..	125	..	64	..	360	..	141	63	..	..	..	..	125	713	75	125	200
Tulare	2,750	1,500	..	1,000	..	30	..	200	..	..	..	20	..	..	..	..	..	487	..	..	..	856
Yolo	40,000	13,000	600,000	20,000	800,000	3,000	120,000	300	9,000	..	..	..	..	6,000	2,000	..	10,000	6,000	..	..	..	..
Yuba	18,000	1,845	36,900	2,199	54,975	220	4,400	35	1,400	..	..	..	..	2,733	..	..	..	1,272	1,074	..	..	..

No reports have been received from Calaveras, Contra Costa, Humboldt, Klamath, Mariposa, Monterey, Santa Barbara and Tuolumne Counties. Nothing of importance received from Merced and San Francisco Counties. For P
bushels; San Francisco, 1,000 acres, 20,000 bushels; Santa Barbara, 400 acres, 8,000 bushels.

* Mendocino included.

CK. IMPROVEMENTS.

Calves.	Total Cattle.	Sheep.	Swine.	Goats.	Fruit Trees and Vines.											Flour Mills.			Saw Mills.			Mining Ditches.						
					Peach.	Apple.	Pear.	Cherry.	Plum.	Apricot.	Quince.	Fig.	Total Fruit Trees.	Grape Vines.		Steam Power.	Water Power.	Total.	Run of Stones.	Steam Power.	Water Power.	Total.	Quartz Mills.	Number.	Length in Miles.	Value.	Bridges.	Ferries.
2,061	17,745	8,306	4,641	482	46,449	49,067	4,736	4,717	3,710	2,000	1,728	140	113,991	55,480	2	1	3	10	..	..	..	..	..	..	..	1	..	
..	1,963	934	2,350	150	1,438	927	..	..	..	..	..	..	2,465	4,730	1	1	2	4	9	6	15	13	30	300	$450,000	..	..	
1,350	7,236	3,636	7,350	127	..	..	..	..	..	..	..	..	..	..	..	2	2	4	4	10	14	..	..	..	..	1	10	
867	13,064	4,122	5,761	4	200	..	..	..	..	..	..	..	200	..	..	..	2	2	4	..	..	..	..	..	..	..	..	
519	3,259	654	4,620	..	1,159	1,608	34	39	40	15	25	12	2,932	3,000	..	1	1	..	24	16	40	7	20	800	..	15	..	
..	106,159	28,528	1,900	600	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	
..	17,775	2,588	4,027	..	..	..	..	..	..	..	..	..	2,500	..	..	..	..	..	4	..	4	..	..	..	..	..	..	
..	17,379	3,396	12,911	65	66,962	16,062	6,129	525	650	500	337	275	91,440	57,600	2	3	5	8	1	4	5	..	..	..	..	..	..	
..	2,300	..	7,800	..	..	..	..	..	..	..	..	..	3,200	..	..	..	1	..	..	..	..	..	..	..	..	..	..	
..	715	..	1,000	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	11	6	..	..	..	..	..	
2,749	10,943	7,678	5,949	93	27,102	15,405	4,173	1,993	5,927	986	836	518	56,844	33,180	7	..	7	21	2	..	2	..	4	59	365,000	10	7	
..	14,561	7,304	994	106	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
..	18,300	3,200	2,000	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	
..	16,326	4,075	20,298	296	3,000	1,000	300	..	..	..	..	..	4,300	..	..	..	7	21	..	..	3	..	..	..	..	..	..	
..	41,200	2,500	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	
3,165	20,637	10,000	15,000	925	..	..	1,500	..	..	..	..	..	13,500	30,000	2	5	7	17	..	..	10	..	..	..	..	..	..	
..	6,900	2,300	3,400	40	300	3,000	351	..	..	..	..	..	3,851	7,000	..	..	4	..	3	8	11	..	..	..	..	..	..	
1,023	2,946	175	3,117	15	3,241	1,876	266	65	63	84	1,062	36	6,718	5,447	2	..	2	6	..	..	12	2	..	..	..	..	..	
46	422	314	1,571	15	306	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	1	78	..	389,000	2	..	
..	3,000	200	1,500	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	80	200,000	..	1	5	
..	22,179	14,279	16,415	162	7,039	1,087	756	..	..	660	147	224	9,813	56,173	3	..	3	..	..	..	..	..	..	..	..	..	..	
5,750	26,250	7,965	19,459	75	..	..	..	..	..	..	..	..	6,730	24,800	1	5	6	..	..	..	8	..	..	..	..	..	..	
..	9,937	3,747	1,416	100	..	..	..	..	..	..	..	..	837	449	..	..	1	1	..	..	1	..	..	..	..	..	15	
..	15,189	2,521	7,235	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
83	408	..	..	..	762	1,264	465	100	200	..	..	..	2,791	..	..	..	1	..	..	..	15	..	247	..	..	3	13	
..	3,634	856	1,397	1,000	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
..	23,000	2,000	35,000	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
..	6,045	865	5,378	..	..	..	..	..	..	..	..	..	8,260	17,000	5	1	6	12	..	..	23	2	18	..	117,400	7	8	

Placer County, see Notes. In the following Counties the Wheat Crop for the past season has been thus estimated: Contra Costa, 3,000 acres, 45,000 bushels; Monterey, 1,600 acres, 24,000 bushels; Placer, 3,000 acres, 75,000

† Horses and Mules.

5. RECAPITULATION.

Agricultural Products, Live Stock, Improvements, Etc.	Total.	No. of Counties.	Agricultural Products, Live Stock, Improvements, Etc.	Total.	No. of Counties.
Acres, cultivated ...	257,630	16	Swine, No.....	192,589	26
Wheat, acres.....	132,367	22	Goats, "	4,253	17
" bushels.....	2,332,603	22	Peach Trees, No....	157,958	12
Barley, acres.....	85,593	21	Apple " "	91,896	10
" bushels.....	3,026,807	21	Pear " "	18,754	10
Oats, acres	29,375	21	Cherry " "	7,429	6
" bushels	913.500	16	Plum " "	10,590	6
Corn, acres	4,317	17	Apricot " "	4,045	6
" bushels	143,326	13	Quince " "	4,135	6
Potatoes, acres	9.659	12	Fig " "	1,205	6
" bushels ...	484,376	10	Total Fruit Trees...	330,312	17
Vegetables, acres ...	6,181	10	Grape Vines, No ...	294,759	12
Hay, acres.....	13,083	7	Flour Mills, steam ..	25	9
" tuns	42,499	15	" water..	21	9
Wool, lbs.....	106,615	6	" total...	65	20
Butter, "	261,016	7	" run of stone	110	12
Cheese, "	209,477	6	Saw Mills, steam....	47	7
Horses, No.....	78,707	28	" water....	44	5
Mules, "	13,937	22	" total.....	246	19
Asses, "	861	14	Quartz Mills.....	49	8
Oxen, "	15,072	13	Mining Ditches.....	224	8
Cows, "	38,760	15	" miles.	2,168	6
Calves, "	17,613	10	" value	$2,185,300	7
Total Cattle	429,243	28	Bridges, No.....	57	10
Sheep, No.....	123,094	25	Ferries, "	59	7

The Wheat Crop for 1855, may be estimated as follows:

	Counties.	Bushels.
As per Table,.....	22	2,332,603
" " 13,202 acres, 20 bushels per acre..	5	264,040
As per margin.....	5	172,000
Totals.....	32	2,768,643

6. STATISTICAL NOTES.

ALAMEDA COUNTY.

Acres of Wheat rusted and not harvested, 1,938. Strawberries, 27 acres; yield 40,500 lbs. Apple Orchards, 229 acres. Peach Orchards, 72 acres. Vineyards, 34 acres. Nurseries, 91 acres. Peaches, 6,000 lbs. Miles of Hedge, 2¾. Ornamental Trees, 30,000. Number of Poultry, 18,764. Dozens of Eggs, 81,782. Flour Mills, 3; make 500 bbls. per day. Several Artesian Wells, from 250 to 350 feet deep.

AMADOR COUNTY.

Acres of Land claimed, 34,333. Saw Mills, 15; cost $100,000; make 9,850,000 feet lumber per annum; value of lumber, $295,500; expenses, $197,000; profit, $98,500. Flour Mills, 2; cost $14,000; make 666,000 lbs. per annum; receipts, $6,660; expenses, $4,995; profit, $1,665. Quartz Mills, 6; crush 18,000 tons quartz per annum, with 50 stamps; receipts, $270,000; expenses, $133,000; profit, $137,000. Miles of Telegraph, 25

BUTTE COUNTY.

Corn destroyed by grasshoppers. Suspension Bridge, 250 feet span; capital stock, $39,000.

COLUSI COUNTY.

Area, 1,792,000 acres; Mountain Land, 856,000 acres; Valley Land, 936,000 acres; Spanish Claims, 241,845 acres; fit for cultivation, 600,000 acres; grazing, 1,000,000 acres. Flour Mills, 2; cost $30,000; grind 25,000 bushels grain and make 5,200 bbls. flour per month. Value of Poultry, $4,500.

CONTRA COSTA COUNTY.

(Surveyor's Report for 1854, omitted in former Report.) Tillable Lands, 150,000 acres; Overflowed lands, 150,000 acres. Horses, 16,000. Cattle, 25,000. Sheep, 95,000. Swine, 9,000. Wheat, 200,000 bushels. Potatoes, 50,000 bushels. Tons of Grapes, 75.

EL DORADO COUNTY.

Acres inclosed for agricultural and grazing purposes, 8,000. Value of animals slaughtered, $600,000. Tons of Quartz crushed per day, 50, yielding $20 to $80 per ton. Miles of Telegraph, 75. Value of Poultry, $5,000. Fine Marble found in county.

LOS ANGELES COUNTY.

Beans, 8,654 quintals or cwt. Sweet Potatoes, 450 do. Salt, 1,000,000 lbs. Artesian Well, 570 feet; cost $3,000.

MARIN COUNTY.

Area, 700 square miles; two-thirds suitable for cultivation and grazing. Acres of Wheat entirely destroyed by rust, 2,028. Barley and Oat crop light. Potatoes, 30 sacks to the acre. Acres white Beans, 180. Taxable property, $833,679.

NAPA COUNTY.

Rye, 120 acres. Buckwheat, 20 acres. Occupied by Gardens, Vineyards and Orchards, 675 acres. Whole number acres assessed, 250,347. Grapevines yield 3 lbs. each. Subsoiling recommended. "Clubhead" wheat condemned. Value of Poultry, $14,000. Value of Eggs, $13,124.

NEVADA COUNTY.

Land claimed and surveyed, 30,000 acres. Toll-Bridges, 8; assessed value, $26,300. Quartz Mills, 16; value $300,000; tons crushed per year, 75,000; value per ton, $25; expense per ton, $15; probable value of Quartz Mines, $2,000,000. Saw Mills, 27; cutting 2,000,000 feet per month; worth $20 to $35 per M. Flour Mill, 1; capital, $25,000; flour ground per annum, 5,000 bbls.; tons of barley ground per month, 20; value of flour, $60,000. Probable yield of Mines, $5,000,000 per annum.

PLACER COUNTY.

Ranchos, 143; assessed value of improvements and stock, $219,000. Assessed value of taxable property in county $1,700,000. Saw Mills, 20; value, $86,000. Toll Roads and Bridges, 9; value $71,000. Mining capital, $100,000, assessed on productive claims. Mining Ditches, 29; value, $375,000. Quartz Mills, 2.

PLUMAS COUNTY.

Lands claimed, 14,604 acres; Swamp Lands, 4,000 to 5,000 acres.

SACRAMENTO COUNTY.

Flour Mills, 7; value, $66,000; 630 bbls. flour per day. Saw Mills, 2; value, $35,000; 2,500,000 feet lumber per annum. Iron Foundries, 2. Distilleries, 1; value, $8,500; makes 120 bushels grain into 360 gallons of whiskey per day; value of whiskey per annum, $89,856. Bridges, 10; aggregate length, 4,000 feet; cost $307,800; annual income, $39,000. Ferries, 7; cost $3,800; annual income, $9,200. Mining Ditch Companies, 4; aggregate income, $188,000. Poultry, No. 19,496.

SAN BERNARDINO COUNTY.

Grapes, 202,500 lbs. Peaches, 650 bushels. Pears, 200 bushels. Onions, 1,000 bushels. Beans, 500 bushels.

SAN JOAQUIN COUNTY.

Acres under fence and improved, 61,788. Public Schools, 15. Grapes, 12 acres. Club Wheat recommended.

SAN LUIS OBISPO COUNTY.

Agricultural Land, 30,000 acres. Grazing Land, 250,000. Fruit Trees, 25 acres. Beans, 2,500 bushels. Value of animals slaughtered, $15,000.

SANTA CLARA COUNTY.

Acres under fence, 50,000. Onions, 2,500 bushels. Rye, 75 acres, 1,875 bushels. Buckwheat, 20 acres, 400 bushels. Beans, 200 acres, nearly destroyed by drought. Flour Mills, 7; grind 500 bbls per day. New Alameda Quicksilver Mine yields annually 22,000 bottles, at 75 lbs. per bottle. Artesian Wells, 63; many discharge 500 gallons per minute; one well, 6 inches diameter, 209 feet deep, cost $600; discharges 1,000 gallons per minute. Miles Telegraph, 30; cost, $40,000. "Santa Clara College," founded 1851; building and grounds cost $50,000; library, 10,000 volumes; students, 111. "University of the Pacific," founded 1851; building and grounds cost $30,000; male pupils, 134; female pupils, 109. "Young Ladies Seminary," founded 1851; building and grounds cost $75,000; pupils, 130; Girls' Free School attached, 53 pupils. Total number of public and private Schools, Colleges, etc., 25; aggregate number of scholars, 1,218.

SANTA CRUZ COUNTY.

Agricultural Land, 180 square miles; Grazing, 150 square miles; Timber and Mineral Land, 250 square miles. Acres of Wheat, 2,500, and acres of Oats, 700, spoiled by rust and smut and not harvested. Acres of Beans, 250, at 40 bushels per acre. Acres of Buckwheat, 50, at 30 bushels per acre. Acres of Onions, 45. Acres of Cabbage, 8. Acres of Peas, 6. Gardens, 50 acres. Barrels of Lime burned and shipped, 30,609. Flour Mills, 4; make 60 bbls. per day, each. Saw Mills, 11; make 1,200 feet per day, each. Taxable Property, $1,000,000. Eggs, dozen, 60,000.

SHASTA COUNTY.

Cotton, half acre; yield 200 lbs. Saw Mills, 12; cost, $58,000; expense per day, $226; make 24,000 feet lumber per day, at $45 per M. Flour Mills, 2; 100 horse power engine; cost $85,000; expense, $7,000 per month; make 2,044 bbls. per month. Quartz Mills, 2; cost $40,000; one in operation crushes 180 tons per month; expenses, $1,680, and yield per month, $5,400. Artesian Well 93½ feet deep. Value of Animals slaughtered, $97,000. Value of Poultry, $5,680.

SIERRA COUNTY.

Saw Mills, 25; value, $93,000. Quartz Mill, value, 8,000. Mining Ditches in progress, 50; probable cost, $1,500,000. Beeves slaughtered, from 1,500 to 2,000. Taxable property, $1,484,560.

SISKIYOU COUNTY.

Area, 100,000 acres; Swamp and Overflowed, 25,000; claimed, 35,000; under fence, 20,000. Fruit Trees, 500 acres.

SOLANO COUNTY.

Area, 900 square miles; subject to overflow, 110,000 acres; mountain land, 155,000 acres; valley land, 310,000 acres; fit for cultivation, 175,000 acres; grazing, 135,000 acres. Broom Corn, 150 acres. Onions, 50 acres, 500 tons. Olive Trees, 1,000. Locust Trees, 2,000. Value of Animals slaughtered, $100,000. Artesian Wells, 2.

SONOMA AND MENDOCINO COUNTIES.

Inclosed Land, 37,052 acres. Club Head Wheat, destroyed by rust, and not harvested, 8,733 acres. Buckwheat, 99 acres; 2,778 bushels. Peas, 156 acres; 4,680 bushels. Beans, 177 acres; 2,124 bushels. Potatoes, 1,693 acres; 67,720 sacks. Grapes, 50 tons. Saw Mills, 8; 110,000 feet of lumber per day. Steam Flour Mill, 2 run of stones; cost $6,500; 75 bbls of flour per day.

STANISLAUS COUNTY.

Men at work in Mines, 250; gold per annum, $225,000.

SUTTER COUNTY.

Area, 400,000 acres; two-fifths swamp and overflowed. Cabbages, 1,000,000 lbs. Onions, 28,195 lbs.

TRINITY COUNTY.

Acres fit for cultivation, 10,755 acres; claimed, 24,849 acres; swamp and overflowed lands, 255 acres; grazing, 104,827 acres. Beeves slaughtered per annum, 3,000. Ferries, 13; cost $7,300; income, $3,950. Bridge, cost $7,000; income, $4,000. Saw Mills, 15; cost $63,074; 2,695,000 feet lumber per annum; expenses, $90,000; value of lumber, $188,650. Gold Dust bought per annum, 78,000 ounces.

TULARE COUNTY.

Agricultural land, 1,600 square miles. Taxable property, $438,000.

YOLO COUNTY.

Area, 370,000 acres; arable land, 130,000 acres; unproductive lands, 20,000 acres; Tule lands, 80,000; mountainous and grazing, 120,000 acres; land inclosed, 60,000 acres. Poultry, 14,000; value, $10,000. Eggs, 200,000 dozen.

YUBA COUNTY.

Area, 552,000 acres; fit for cultivation, 280,000 acres; grazing, 80,000 acres; mineral land, 174,960 acres; Steam Saw Mills, 6; value, $19,500; Saw Mills, (water power,) 16; value, $38,600; lumber per annum, 3,875,000 feet; cost per M., $15; value per M., $25. Steam Flour Mills, 5; value, $44,000; bushels ground per year, 95,862. Turnpike Companies, 2; length, 71 miles; cost $35,000.

STATISTICS FROM OTHER SOURCES.

SAN JOAQUIN COUNTY FLOURING MILLS.

Paige & Webster's, Stockton; fire-proof brick building; cost nearly $100,000; capacity, 200 bbls in twenty-four hours.

Sperry & Baldwin's, Stockton; in operation five years; capacity, 100 bbls. flour and ten tons barley in twenty-four hours; fire-proof warehouse, 40 by 80 feet, attached; can store 600 tons grain and flour.

Sargent, Stagg & Lane's Avenue Mills, Stockton; in operation two years.

Hodges & Terry's, on Mokelumne River, about eighteen miles from Stockton; capacity, 50 bbls. per day.

Doake's, near Fifteen Mile House, on Mokelumne Hill Road; built within the past year.

The Stanislaus Mills, at Knight's Ferry, about forty miles from Stockton, on west bank of Stanislaus River; dam 300 feet, and fifteen feet high; only water-power mill in county.

Total, six mills; capacity, 600 bbls. flour per day.—*Stockton Argus.*

CALAVERAS COUNTY.

Saw Mills, 14; 9 steam and 5 water; aggregate horse power, 202; utmost capacity, 1,065,000 feet lumber in 24 hours. Bridges, 10; one wire suspension, 3 truss and 6 beam; aggregate value, $96,000. Ferries, 8; aggregate value, $70,000. Mining Canals, 21; length, 328 miles; estimated value, $1,016,500; other short ditches, 40 miles; value, $14,000; aggregate length, 368 miles; aggregate value, $1,030,500.—*From Report of Wm. Patton, Civil Engineer.*

TUOLUMNE COUNTY—MINING CANALS.

Tuolumne County Water Company's Ditch; assessed value, $275,000; main trunk from South Fork of Stanislaus River to Columbia; entire length of main ditch and branches, about fifty miles.

Tuolumne Hydraulic Ditch, from Tuolumne River to Sonora; entire length, including branches, near sixty miles; original cost, $300,000; assessed value, $30,000.

Street's Ditch, or Sulivan's Creek and Shaw's Flat Water Company; original cost, $75,000; additional cost when extended to Main Fork of Tuolumne River, $100,000; Entire length, fifty to sixty miles; twenty miles through a mining region.

Columbia and Stanislaus River Water Company—Capital stock, 1,500 shares of $2,000; total, $300,000; nearly completed to South Fork of Stanislaus, to be extended to the Main Fork; $80,000 already expended; when completed, the length of the main branch will be over fifty miles.

Jamestown and Chinese Ditch, from Wood's Creek to Chinese Camp—Capital stock, $22,000; length, about seven miles, nearly completed.

Chili Camp Ditch—Value, $3,000; length, four miles.

Seco Ditch—Value, $3,000; length, three miles.

Pine Ditch—Value, $2,000; length, five miles.

Yorktown (Brunton's,) Ditch—Value, $6,000; length, five miles.

Republican Ditch—Value, $3,000; length, four miles.

Jamestown Ditch—Value, $1,000; length, two miles.

Wood's Digging's Ditch—Value, $8,000; length, 10 miles.

Aggregate length of Canals in the County, 255 miles, of which thirty-five miles are not completed; original cost, about $1,800,000; cost when complete, $2,000.—*Sonora Herald.*

OTHER MINING CANALS.

Bear River and Auburn Mining Canal—Projected in 1851; capital stock, $650,000; seventy-three miles of main, and as many more of distributing Canals; capacity, twelve cubic feet per lineal foot; cost, $560,000; paying $50,000 per month for repairs, and one per cent per month interest on capital; with economy and prudence would not have cost more than one-half the sum expended in its construction.

South Fork Canal—$400,000 expended, and Canal sold; yields twenty-five per cent. per month on the purchase; can supply 7,000,000 cubic feet of water per day.

At Coloma, six Mining Ditches, averaging ten per cent. per month on investment, and furnishing employment for 2,000 men, who pay four dollars per day for water.

Natoma Canal—Water from the South Fork of the American River; projected in 1852; capacity, sixteen cubic feet per lineal foot; current, three miles the hour; supply 6,000,000 cubic feet per day; cost of forty miles of main trunk, and as many of branches, $150,000; paid for in one year; now clear of all incumbrance, and paying $2,000 per week.

North Fork Canal—Capacity, fourteen cubic feet per lineal foot; current, two and a half miles the hour; owned and managed by the former Company, with similar results.—*From the Report of W. S. Watson, C. E.*

CONTEMPLATED CANALS.

Truckee Lake Canal—Capital, $10,000,000; water from Truckee Lake, through the dividing ridge of the Sierra, by tunnel several miles in length, to be distributed on the ridges of the heads of the Yuba; capacity, nearly 100 cubic feet per lineal foot.

South Yuba Canal—Will probably be completed in July, 1856, through the ridge dividing the waters of Yuba and Bear Rivers, by tunnel two-thirds of a mile in length; tunnel estimated at $40,000; capacity, twenty-five cubic feet per lineal foot, with a current of four miles the hour.

Placer County Canal Company—Capital, $300,000, to bring water from the North Fork of the American River, at Grand Falls, down the divide of North Fork and Bear River; entire length, with branches to Illinoistown, about forty miles, supplying a mining region forty by seven miles; capacity, twenty-four cubic feet per lineal foot; grade, ten feet per mile; current, six miles the hour; will discharge 15,000,000 cubic feet of water, equal to 6,000 inches, per day; whole lenth of main trunk, eighteen and a half miles, under contract for $150,000; to be completed by September, 1856; anticipated revenue, $2,500 per day.—*From Report of W. S. Watson, C. E.*

VIII. APPROPRIATIONS RECOMMENDED.

For Explorations and Surveys of Immigrant Wagon Roads	$15,000
For Construction of " " "	150,000
For Selection of School Lands	5,000
For Securing Swamp and Overflowed Lands	12,000
For Survey of County Boundaries	10,000
For Goddard's Topographical Map (cash)	2,000
For Meteorological Instruments	4,000
For Contingencies	2,000
Total	$200,000

IX. CONCLUSION.

The salary of this office during the last two years has been but $2,000 per annum, in scrip, equal to about $1,400, less than half the pay of members of the Legislature, and considerably less than the pay of Pages in the Senate and Assembly, and not sufficient for the personal expenses of the incumbent. No fees are attached to the office, and none have been received during that time. For the two previous terms the salary was $7,500. The present salary is far less than civil engineers may command for their services in the exercise of their profession in this State.

Until quite recently, the salary of the Chief Engineer of the Sacramento Valley Railroad has been $8,000, and the Surveyor-General has never been able to employ an engineer to assist him for anything like the amount he has received for his own services. Inasmuch as he believes that he has been a faithful and laborious public servant, and that his services are worth more than he has received for them, he respectfully asks that he may be allowed extra compensation; and as he believes that $6,000, in addition to his salary for the last two years, would not be an unreasonably large sum, he respectfully asks the same.

I take great pleasure in expressing the opinion that I have been particularly fortunate in my selection of assistants during the past year. Had I the same duties to perform again, my first endeavor would be to obtain as assistants, Messrs. Day, Goddard and De Witt.

All of the foregoing is respectfully submitted.

S. H. MARLETTE,
Surveyor-General.

NOTE.—This is the earliest moment at which I have been able to transmit my Report. A statement of the expenditures of this office and required appropriations to meet deficiencies, was transmitted some time since, one copy to the Speaker of the Assembly, and another to the Chairman of the Senate Finance Committee, and may be found substantially in Appendix A, No. 1. Mr. Still's account for surveying a part of the Sierra County boundary, may be found in his Report in Appendix C. His map I transmit to the Senate, also a map of the State Prison Grounds, and a diagram illustrating Mr. W. Patton's contribution, and a map illustrating Mr. Chapman's communication. Also, a map of the Calaveras Wagon Road Route. Mr. Goddard's maps and profiles will be transmitted in a few days. To both Senate and Assembly I transmit a copy of the map, showing what U. S. Township plats have been received, and what copied and sent to the County Surveyors. S. H. M.

Sacramento, Feb. 16, 1856.

APPENDIX

TO

SURVEYOR-GENERAL'S REPORT.

APPENDIX.

APPENDIX A.

1. EXPENDITURES AND DEFICIENCES IN SURVEYOR-GENERAL'S OFFICE.

Annexed may be found in Exhibit A, a statement of the expenditures of the Surveyor-General's Office (during my term,) since February 1, 1855, including the expenditures necessarily incurred by me for the State, since the expiration of my term of office, up to the 7th of February, 1856.

EXPENDITURES.

Cash, $7,830 78; Scrip, $7,831 43;—equal to about $13,700 in cash, or $18,000 in scrip.

Exhibit B shows the *deficiences*, and to whom due.

DEFICIENCES.

Due in cash, $6,977 30; due in scrip, $6,915 20;—equal to about $12,000 in cash or $16,000 in scrip.

NOTE.—The above statement of *expenditures* and *deficiences* includes about $2,000 (in scrip) for advertising; about $1,500 of which is for advertising an abstract of the Act for the sale of the swamp and overflowed lands, and the instructions for the survey of the same, in the *Times and Transcript* (20 insertions), in the *Sacramento Union* (15), in the *San Joaquin Republican* (12), and in the *California Express* (6). The claim is not strictly legal, but it is equitable, and I recommend that it be paid. The above named papers inserted the advertisement at my request, relying upon the justice of the Legislature for compensation. If the Act was worth passing, it was worth being made public—particularly the portions published.

Exhibit C shows for what purposes the contingent fund has been expended.

Exhibit D shows the amount due me for cash expenditures for the State, beyond the appropriations, as equal to $855 35, to which I have added $400, for services since the expiration of my term of office. Total, $1,255 35 cash.

Exhibit E consists of certified accounts of Jesse Hackett, George H. Goddard, Thomas Tennent, the United States Surveyor-General and Ferris Foreman, *all for cash;* it having been understood that they were to be paid in cash or its equivalent. Total, $5,722 30 cash.

It also contains certified accounts of Sherman Day, James Langley, Wm. L. De Witt, Nevett & Co., A. Konemen, James Allen and Edwin Billings, *all for scrip;* it having been understood that they were to be paid with the same. Total, $3,992 scrip.

It contains also Milton Ferrell's account for $120, of which I have recommended $100 be paid.

Exhibit F consists of Silas Wilcox's account for the survey of the boundary line between the counties of Stanislaus and Tuolumne, ordered by the last Legislature, for $481.

I am of the opinion that Mr. W. is entitled to charge eight (most certainly six) dollars, instead of four per mile. I would, therefore, recommend that his bill be paid as made out by him.

Exhibit G consists of C. D. Semple's account for survey of boundary line between Colusi and Yolo Counties, authorized by me under the Act concerning the office of Surveyor-General, for $342 20.

His account should have been certified to by the Board of Supervisors and County Judge, yet, as the work has undoubtedly been done, I recommend that he be paid.

My approximate estimate, scrip $24,000 of Dec. 15, contained $7,000 for county boundary surveys, whereas this statement includes less than $1,000. Returns for the balance have been, or probably will be, received by my successor.

EXHIBIT A.

EXPENDITURES OF SURVEYOR-GENERAL'S OFFICE.

WAGON ROAD.

	Scrip.	Cash.
For reconnaissance of routes, including Eastern Boundary Survey	$1,537 20	$2,781 91
For survey of Wagon Road	1,456 00	225 17

Equal to about $5,300 cash, of which about $1,000 was expended in purchasing instruments.

STATE LANDS.

For U. S. township plats,		3,200 00
For copying "		367 50
" " and swamp land returns	1,230 00	
Advertising and printing, about	2,000 00	

Equal to about $5,600 cash.

County Boundary Surveys	833 20	
State Prison Ground Survey and Map	112 00	
Office Rent	426 33	85 00
Contingent expenses	246 70	771 20

Equal to about $900 in cash.

For my own services since the expiration of term of office, I have reported		400 00
Totals	$7,831 43	$7,830 78

Equal in cash to about $13,700 00
" scrip, " 18,000 00

EXHIBIT B.

DEFICIENCIES OF SURVEYOR-GENERAL'S OFFICE.

CASH.

Due S. H. Marlette	$1,255 00
Jesse Hackett,	237 00
George H. Goddard	1,882 25
Thos. Tennent	259 00
U. S. Surveyor General	3,200 00
F. Foreman	144 05
Total deficiency to be paid in cash	$6,977 30

SCRIP.

Due Sherman Day	$2,600 75
James Langley	714 00
William L. De Witt	516 00
Nevett & Co.	59 25
A Koneman	71 00
James Allen	17 00
Edwin Billings	14 00
Milton Ferrel	100 00
Silas Wilcox	481 00
C. D. Semple	342 20
Total deficiency to be paid in scrip	$4,915 20

NOTE.—To the above should be added for certified accounts for advertising and printing, about $2000 in scrip, if not otherwise provided for.

Total deficiency, including $2,000 scrip, for advertising, equal in cash to about $12,000.

Equal in scrip to about $16,000.

EXHIBIT C.

State of California in account with Surveyor-General's Office.

1855.	CR.	
	By appropriation for contingent expenses	$2,000 00

Dr.

April 17.	To W. G. Chambers, for porterage	$26 50	
30.	To expenditures of Surveyor-General on trip to San Francisco to consult U. S. Surveyor-General about Map	41 25	
	To D. W. Ap. Jones, for Monk's Map of U. S...	25 00	
	To James Gudgeon, for wood	6 25	
May 1.	To Chas. Binney, for stationery	36 00	
4.	To James Anthony, for *Sacramento Union*	12 00	
17.	To A. Koneman, for candles and matches	17 87	
25.	To J. W. B. Barclay, for horse	301 20	
June 6.	To A. B. Youmans, for rent for June	83 33	
11.	To H. Rivett, for awning	55 83	
16.	To Rivett & Co., for matting, and for moving office fixtures	26 00	
			$631 23
	Balance		$1,368 77

The above was drawn July 2, and sold at 75 per cent., realizing	$1,026 58	
Add amount realized June 2, from sale of warrant for $34 91, at 60 per cent., from Quartermaster-General, for stove, etc	20 95	
		1,047 53

May 25.	To cash paid Williams, for bringing horse, and for keeping same, etc	8 00	
	To balance on horse to J. W. B. Barclay, to meet loss on scrip	39 16	
	To cash paid Roth, for saddle, bridle, etc	55 00	
	" " for whip and mending bridle.	2 00	
June 26.	To table, hone, matting and oil cloth	17 25	
July 2.	To cash to George H. Goddard	18 50	
	" A. B. Youmans, for rent	50 00	
	" " for shelves	10 00	
	" Chas. Binney, stationery	37 90	
3.	" George H. Goddard	50 00	
7.	" "	11 50	
	" Pacific Express Co	20 00	
10.	" Charles Pace, Altitude and Azimuth Instruments	600 00	
	" Gillig & Co., for sprinkler	1 25	
12.	" Smith & Barclay, horse-keeping and shoeing	47 50	
13.	" F. Forman, postage and box rent	42 00	
15.	" for blankets, saddle-bags, etc., for Carson Valley expedition	19 00	
16 to 26.	" expenditures on Carson Valley expedition	12 00	

July 28.	To cash to Carr & Winans, pedestal in Observatory	$25 00	
			$1,066 06
	Deduct credit as above		1,047 53
	Excess of expenditures, July 28		$18 53

EXHIBIT D.

State of California to S. H. Marlette,

1855.		Dr.	
July 28.	To cash expended beyond appropriation, as above		$18 53
Aug. 1.	" paid George H. Goddard		7 50
2.	" " for tent for Mr. Goddard's expedition		12 00
	" " rope and wool for " "		2 25
	" " oiled silk case for altitude and azimuth instrument		9 00
	" " Stage Co., and others, for freight on saddle and sundries		2 50
3.	" " Geo. H. Goddard		30 00
4.	To note given to Wm. Schmolz for barometer		55 00
6.	To cash paid Geo. W. Ricker & Co., for observatory, drafting desk and stand for altitude and azimuth instrument		100 00
13.	" Geo. O. Whitney for desk stool		2 50
14.	" A. B. Youmans for office rent		50 00
15.	" Sherman Day		50 00
21.	" expenditures on trip to Placerville		8 00
Sept. 7.	" J. W. B. Barclay, horse keeping, shoeing, etc.,		62 50
12.	" C. Binney, stationery		25 00
14.	" for repairing theodolite		1 00
	" Sherman Day		20 00
20.	" " "		80 00
24.	" " "		19 00
25.	" " "		30 00
	" to Michiner for tent, duck and drill		23 22
Oct. 1.	" Sherman Day		10 00
	" Mr. Schmolz for leveling rod		20 00
2.	" Geo. W. Hancock (for assisting Mr. Day)		21 00
	" Seth Dustin " "		21 00
3.	" Fare, etc., of Mr. Goddard and self from Placerville		5 75
4.	" For telegraph charges, etc.		3 80
13.	" Geo. H. Goddard		20 00
17.	" Wines & Co.'s Express charges on Map		50
19.	" Eye-glass, keel and pencils, etc., for Mr. Day		2 30
31.	" Geo. H. Goddard		60 00
Nov. 1.	" J. W. B. Barclay, horse keeping, shoeing, etc.		60 00

Oct. 31 to Nov. 9.	To cash paid expenditures on trip to Calaveras, on wagon road business		$40 00
Nov. 14.	To cash paid J. Gudgeon for wood		4 50
15.	" Geo. H. Goddard		20 00
Dec. 1.	" Mr. Murray, rent of office for December		50 00
4.	" J. W. B. Barclay, horse keeping and medicine for horse		21 00
5.	" Geo. H. Goddard		50 00
	" Jesse Hackett, porterage		25 00
9.	" J. Gudgeon for wood		9 00
28.	" " "		4 50
	" Geo. H. Goddard		50 00
1856.			
Jan. 1.	" " "		100 00
4.	" J. Gudgeon for wood		4 50
7.	" Mr. Murray for office rent		15 00
	" D. Woods, and Wormser Brothers, interest on money used for State during last year		13 00
	Add interest to be paid to David Woods, March 1st, 1856, on notes for $380 used for State		81 00
			$1,319 85

Cr.

Aug. 14.	By cash realized from sale of warrant for $133 33, at 75 per cent., from rent fund for office rent for July and August	$100 00	
17.	By cash realized from sale of warrant for $83 33 at 72 per cent., transferred from rent fund for office rent for June	60 00	
Dec. 5.	By cash received of Wm. Higby, for horse, saddle, bridle, etc., belonging to State, sold early in November	335 00	495 00
	Balance due S. H. Marlette, in cash, Jan. 7th, 1856		$824 85

I certify the above bill to be corrrect.

S. H. MARLETTE,
Surveyor-General.

State of California to S. H. Marlette,

1856. Dr.

Jan. 7.	To cash expended for State in Surveyor-General's office, as above	$824 85
9.	To cash paid for cartage in moving part of office fixtures, etc	6 00
20.	To cash paid to J. Gudgeon for wood	4 50
26.	To cash paid J. Morrill for office rent, from Jan. 9th to Feb. 9th, 1856	20 00
	Total cash expenditures for State to Jan. 26	$855 35
	Add for one month's services since expiration of term of office, (from Jan. 7 to Feb. 7,) say	400 00
	Total	$1,255 00

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, Feb. 6, 1856.

EXHIBIT E.

State of California to Jesse Hackett,

Dr.

To porterage from the middle of May, 1855, to 7th of Jan., 1856, at $30 per month $232 00

Cr.

By Cash from S. H. Marlette, Dec. 5, 1855 25 00

Balance due J. H. in cash, Jan. 7th, 1856 $207 00

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Add for services from Jan. 7th to Feb. 7th 30 00

$237 00

I certify the last charge to be correct.

S. H. MARLETTE.

Sacramento, Feb. 7, 1856.

State of California to Geo. H. Goddard,

1855. DR.

Aug. 1.	To salary in Surveyor-General's office, from June 26th to Aug. 1, at $250 per month, (cash)	$291 00
	To cash expenditure at sundry times	76 50
Oct. 1.	To salary on Wagon Road Exploration and Boundary Survey, two months at $300 per month, (cash)	600 00
	To cash expenditures at sundry times	62 25
1856.		
Jan'y 7.	To salary in Surveyor-General's office from 1st of October to Jan. 7th, at $300, (cash)	970
	Total	$1,999 75

CR.

By cash received of S. H. Marlette, at sundry times	417 50
Balance due Mr. Goddard in cash, January 7, 1856	$1,582 25

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Add one month's salary from January 7 to February 7, at same price	300 00
Total in cash	$1,882 25

I certify that during the last month Mr. Goddard has been necessarily and most faithfully employed in completing his map, profiles, report, etc.

S. H. MARLETTE.

Sacramento, February 6, 1856.

State of California to Thomas Tennent,

1855. DR.

From July 9th to Nov. 12th.	To repairing altitude and azimuth instrument and theodolite; also to barometer, thermometer, chains, etc., and hire of chronometers, as per bill, in cash	$259 00

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, January 7th, 1856.

State of California to United States' Surveyor-General,

Dr.

To furnishing the State Surveyor-General's Office with 300 township plats, at sundry times, cost $8 00 each—(an account for the above was certified to, and rejected by the Controller Oct. 9th, on the ground that there was no appropriation to meet it)	$2,400	00
Jan. 7. To furnishing 100 township plats, at sundry times, at $8 00	800	00
Total	$3,200	00

The above should be paid in cash.

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

The State of California to F. Forman,

Dr.

To unsettled postage and box rent for last three quarters of 1855, for which accounts have been certified to by the undersigned, (cash,)..	$144	05

S. H. MARLETTE,
Surveyor-General.

Sacramento, January 7th, 1856.

State of California to Sherman Day,

1855. Dr.

To services surveying and making map of State Prison and grounds, in June, 1855, seven days, at $16 per day.....	$112	00
To services in making reconnaissance of Immigrant Wagon Road routes, in June, July, August and September, seventy-one days, at $16 per day.....	1,136	00
To expenditures on do	72	75
To services surveying Wagon Road in September, October, November, December and January, ninety-one days, at $16 per day....	1,456	00
To expenses on do.....	33	00
Total	$2,809	75

Cr.

By cash received of S. H. Marlette during reconnaissance. $169 00
By cash of do. during survey..... 40 00

$209 00

Balance due Mr. Day, January 7, 1856..... $2,600 75

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, January 7, 1856.

State of California to James Langley,

1855. Dr.

From July to Dec., for 102 days' service in Surveyor-General's Office, copying maps, documents, etc., at $7, (scrip,)..... $714 00

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, December 27, 1855.

State of California to W. L. De Witt

Dr.

To services in Surveyor-General's Office, drafting, etc., from the 12th of Nov., 1855, to the 7th of Jan., 1856, 43 days at $12, (scrip,).... $516 00

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

State of California to Nevett & Co.

Dr.

To stove and fixtures for Surveyor-General's Office, (in scrip)..... $59 25

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, Jan. 7, 1856.

State of Dalifornia to A. Koneman,

Dr.

To candles, matches, rope, box of soap, etc., from June 2, 1855, to January 2, 1856, (in scrip,) $71 00

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, Jan. 7. 1856.

State of California to James Allen,

Dr.

To *State Tribune* for Surveyor-General's office, from April 8, 1855, to January 1, 1856 $17

I certify the above bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, January 7, 1856.

State of California to Edward Billings,

Dr.

To *California Chronicle* for Surveyor-General's office, seven months, in 1855 $14 00

I certify the bill to be correct.

S. H. MARLETTE,
Surveyor-General.

Sacramento, January 7, 1856.

State of California to Milton Ferrel,

Dr.

To services of self and two horses from Sept. 15th to 22d, inclusive, eight days at $15, on Wagon Road and Boundary Survey..... $120 00

The above services were rendered, and I would recommend that Mr. Ferrel be allowed $100 for the same.

S. H. MARLETTE,
Surveyor-General.

Sacramento, Jan. 7th, 1856.

EXHIBIT F.

State of California,
Stanislaus County, August 8, 1855.

State of California in account with Silas Wilcox,

Dr.

To distance run in the survey of the County line between Stanislaus and Tuolumne counties—

27 miles, 151 feet	$109 00
21 monuments erected on line	63 00
20 miles to place of beginning	10 00
3 maps of the line	9 00
Recording	2 00
Assistance on the line, 36 days	288 00
	$481 00

I hereby certify the above account to be correct.

Signed, SILAS WILCOX,
County Surveyor.

We, the majority of the Board of Supervisors of Stanislaus County, have examined the foregoing account of S. Wilcox, Surveyor of this county, charged by him for running the county line between this and Tuolumne County, and believe it to be correct and the charges reasonable.

Witness our hands, this 8th August, A. D. 1855.

Signed,

DAVID B. GARDNER,
JNO. M. NEVISON.

I hereby certify that the above work has been performed to the best of my information and knowledge.

Signed,

H. W. WALLIS,
County Judge.

August 8th, 1855.

EXHIBIT G.

COLUSI, July 28th, 1855.

State of California to C. D. Semple,

DR.

For ascertaining and running the boundary line between the counties of Colusi and Yolo—

29 miles and 12 chains, at $10 for first mile and $8 for each subsequent mile	$235 00
To hire of two chainmen and one workman, 4 days, at $3 per day	36 00
To hire of wagon, team and driver, to break down tule, 2 days, at $10 per day	20 00
Board of hands, at $3 per day	42 00
Plat and Certificate	3 00
Recording	2 00
Traveling to place of beginning, 8 miles	4 00
	$342 00

Signed,

C. D. SEMPLE,
County Surveyor.

I hereby certify that the above account is just and true, and that the disbursements therein named were made.

Given under my hand, the date above,

Signed,

C. D. SEMPLE,
County Surveyor, Colusi County.

2. HON. SHERMAN DAY'S REPORT ON THE IMMIGRANT WAGON ROAD EXPLORATIONS.

Hon. S. H. Marlette, Surveyor-General:

Dear Sir:

At your request I have examined, at different times during the past three months, several routes across the Sierra Nevada, with a view to the construction and improvement of an Immigrant Wagon Road, under the Act passed by the last Legislature. These routes were examined merely by riding or walking over them, or near them, but without a regular survey, and without the use of instruments, except in a few cases, to obtain the bearings of prominent points, or to determine the grades at some of the more difficult places. As it became apparent at an early stage of the examinations, that the question of the boundary between this State and the Territory of Utah, might affect materially the question of the location of the Road, I have given some attention to that point, and have made some surveys to connect Placerville with the U. S. Land Surveys; and also to define the position of the more important mountain peaks, lakes and valleys, near the south end of Lake Bigler, the Carson Cañon and Red Lake, on the Old Immigrant Road. As the astronomical investigations relating to this subject, are in charge of another person, and yet incomplete, I will only remark here, that the facts obtained by my surveys, relating to the boundary, will tend greatly to elucidate the topography of the Road, and show more clearly the relative positions of the different routes. They also serve to assure us that the Carson Cañon, the most important point on the Road and common to all the routes explored, is entirely within the limits of this State.

Since this boundary survey has been undertaken on the part of the State, I am gratified to learn that a U. S. Deputy Surveyor is also occupied in running "a standard parallel" (L on W line) past Placerville, Leek Springs, Red Lake and Carson Cañon to the eastern boundary of the State. The two surveys with the astronomical observations, will serve to test each other, and will furnish accurate data for a correct topographical map of the region examined. On my return, lately, I met Mr. Jones, the U. S. Deputy Surveyor, and exchanged notes with him, by which our surveys can be connected.

Much more time has been spent on these examinations, than would otherwise have been, in consequence of the necessity of depending upon volunteer parties, fitted out by citizens of the towns interested in any particular route. None of the parties liked to be drawn off from their own favorite route to examine another, and as the parties were generally composed of persons who expected to be absent but a few days, I was obliged to be regulated by their arrangements, and to make five or six repeated trips back and forth to the mountains, where one or two would have sufficed, if the party had been fully at my disposal for all and any of the routes.

The first route examined was one leading from Georgetown to the point where the Middle Fork of the American River issues from the higher mountains, and thence, after crossing the main Middle Fork, over the mountains by a smooth and low pass, descending through a valley to the western shore of Lake Bigler, about

opposite the middle of the lake, we went out along the natural ridge between the waters of Silver Creek and those emptying into the Middle Fork. The route along this ridge was generally very smooth, the grades easy, or when difficult, naturally susceptible of improvement at a cheap rate; excellent pasture was most abundant, and up to the point where we struck the high mountains, the route would need little more than to have the bushes and timber cut away, and a few side-hill grades, to make it ready for stage travel. But, unfortunately, at the end of the ridge we found no practicable pass through the mountains. It would be necessary to leave this ridge, cross a tributary of the Middle Fork, then a high granite ridge on the south side of the Middle Fork, then the main Middle Fork, and ascend on the north side of the next mountain spur to the excellent pass which we discovered. This pass is a flat meadow, draining westward, and scarce separated from two upland lakes draining Lake Bigler. The cañon descends by an easy grade, with good earthy surface for a road to Lake Bigler, except for about a quarter of a mile, where large granite boulders are encountered, but presenting no insuperable or very formidable obstacle. In the valley between the summit and Lake Bigler, several good grazing farms might be located.

Circumstances compelled our return from this point, and I did not examine the continuation of the route around the south-west shore of the lake, except so far as I was afterwards enabled to examine it at a distance from the opposite shore. The design at the time was to continue the road around the south shore of the lake, and connect with Carson Valley through the "Eagle Ranch Pass." Of this part of the route I shall have occasion to speak elsewhere. I think a glance at the map is sufficient to convince any one that although this route might ultimately be an available one for the people of Yankee Jims, and Auburn, and Nevada, to connect with a road through Carson Cañon, yet it would seem to be a very circuitious one for the people of Georgetown to take to get round the south shore of Lake Bigler.

The next route examined was one that had been recommended by Mr. Taylor, of Cold Springs, (on the old Immigrant Route above Placerville,) and was then under process of examination by Dr. Bradley, of Diamond Springs, and Mr. Graham, of Ringgold. As you were with us upon this route you are aware that, for a considerable distance on the upper part of the route, immediately below Red Lake and Silver Lake, we could not conveniently travel over the ground, suggested by Dr Bradley for the actual route, but were obliged to view it from a distance on the opposite side of a stream. The design of this route is to follow the old Immigrant Road through Carson Cañon, Hope Valley and the "Eastern Summit Pass," into the valley of Red Lake—by some called Clear Lake and by others Summit Lake—thence, instead of passing another summit, higher than the eastern, and traveling along the very circuitous old road, it is proposed to pass round the western shore of Red Lake, and keep along on the side-hill at the foot of the steep bluffs that form the western summit, and pass down on the south side of the valley of the Red Lake Fork of the American, until the mouths of Silver Lake Fork and Tragedy Fork are passed; thence ascending obliquely and either crossing, or passing around the north end of the high ridge east of Alder Creek, and crossing the valley of that creek, and the valleys of Wolf Creek and Plum Creek, together with the two ridges intervening, the line again joins the old Immigrant Road at Cold Spring. The peculiar merits claimed for this route are, that it crosses but one summit of the high Sierra; that it greatly shortens the distance, compared with the old Immigrant Route; that it is susceptible of improvement at a cheap rate, and that it affords abundant pasturage. The objections urged against it are, that in the more elevated region, where snows fall very deep, by keeping under the shady side of a ridge for several miles, the road is liable to be closed for many weeks earlier and later, than on routes more exposed to the sun; and that much of the advantage gained by avoiding the high

western summit, will be lost by encountering the ascents of Alder Creek, Wolf Creek and Plum Creek ridges. On my recent trip I examined a portion of the route, as far down as "Lover's Leap," about five miles below Red Lake, which we were not able to examine previously. As had been stated by Dr. Bradley, I found two or three rocky dikes to be cut through, but they were not wide, nor exceedingly costly. The overhanging conglomerate rock is very friable and liable to roll down upon the roadway. In the month of September I found the north slope of the mountain in shadow, by the steep overhanging cliffs above, as early in the day as one o'clock. This would cause the snows to be very deep in winter and to remain late in the spring.

What difficulties might present further down I did not ascertain. As far as I have seen the route I think well of it; but before I should decide to give it the preference over any other, I should wish to examine it with instruments, and also carefully consider the testimony and arguments in relation to the snow. Below Taylor's Ranch, or Cold Spring, the present road is quite good, or can easily be made so, without the agency of the State.

East of Red Lake, on the old Immigrant Trail, the road over the eastern summit, needs some improvement before reaching the summit, principally in the way of removing boulders and smaller stones, and at the descent into Hope Valley, about 700 feet of descent, the road needs to be entirely regraded on a new route. Hope Valley presents a good natural road, with a grade of about two degrees. Carson Cañon, extending for five miles between two lofty and rugged cliffs of granite, was formerly the terror of all travelers, on account of the enormous granite boulders with which the route was obstructed; but it has been recently much improved, by partially clearing out the roadway and erecting two bridges, which give access to better road on the other side of the stream. It still needs much improvement. There is room enough for a good grade, and a reasonable amount of labor will make it as good as other roads. It is worthy of being noticed, that this cañon is a common terminus for three different routes proposed—perhaps for four. All parties, therefore, concerned in either of those routes, must rejoice in the prospect of its improvement.

After having passed through this cañon we continued our examinations along the western border of Carson Valley, to the Mormon Station, distance about seventeen miles from Cary's Mill, at the mouth of the cañon. There is a fair, natural road along the gentle slope at the eastern base of the mountains. The mountains rise very abruptly from the western side of Carson Valley. Their sides are covered with the debris of a white, rotten granite, very friable, and assuming naturally a steep slope. A road-way cut along these slopes would be very sandy, and subject to be constantly filled in by the sliding of the sands from above. There is a pass in the rear of Dr. Daggett's, about three miles south of the Mormon Station, leading over to the south-east corner of Lake Bigler, but it is only used for horses and mules, having never been graded for wagons, on account of the difficulties mentioned above.

Passing along the valley at the eastern foot of the mountains, about six miles below the Mormon Station, we turned in to the left, and crossed a low pass lying to the south-west of the Eagle Ranch. Over this pass leads the wagon road known as Johnson's Cut-off. The altitude of the pass at its culminating point, appears to the eye to be less than that of any other pass in this range, east of Bigler Lake. It lies opposite to the middle, apparently, of the east side of the lake, and opposite to the low pass which we came through on the Georgetown Exploration. The ascent is smooth, though rather sandy. The grades might be very much improved by side-hill cutting. The descent from the pass to Lake Bigler, in a line directly west, is very abrupt and precipitous, (so I have been told) but the wagon road does not follow this line, on account of the difficulty

of passing several rocky points that put into the lake, and several swamps at the mouth of the streams between the spurs. It winds its way along the western side of the mountains, near the origin of the larger spurs and gulches, and —as it appeared to me—(though I had no instrument with which to test it,) in several cases ascends to a much greater altitude than that of the pass through which it crossed the summit. Certainly the sum of the ascents and descents in climbing six or seven of these lofty spurs, would have sufficed to have crossed directly over the highest knobs of the mountain, at almost any point. Before the old road through the Carson Cañon had been improved, this wagon route was probably preferable to that as a mode of approaching Bigler Lake Valley, and the western portion of Johnson's Cut-off Road; but at present, I think any person knowing the two routes would much prefer to reach the upper pass of Lake Valley, by passing through the Carson Cañon, and then through Luther's Pass; and I believe that this is now the opinion of Mr. Johnson, the original explorer and improver of the cut-off through the Eagle Ranch Pass. Although the precise position of the boundary line is not yet determined, yet I have very little doubt that the Eagle Ranch Pass, as well as the pass near Dr. Daggett's, are both in the Territory of Utah.

Passing up Bigler Lake Valley from the Eagle Ranch Road, we came to the point where Johnson's Road rises the steep side of the main Sierra, west of Lake Valley. From this point we ascended the valley about a mile further, and crossed over in a south-easterly direction from Lake Valley, through Luther's Pass, into Hope Valley, at the head of Carson Cañon, distance about six miles. Mr. Luther, of Sacramento, first crossed this pass with a wagon in 1854. It was surveyed during last winter by Mr. Henderson, County Surveyor of El Dorado County, as a portion of the route from Placerville by way of the South Fork, to Cary's Mill. This pass is, naturally, one of the best I have seen over this range of mountains. Several miles of it are now good natural road. The other portions need grading, and removal of rocks. For about a mile the upper portion of the valley through which the pass opens, is occupied by a lagoon and marshy flat. The ascent from Hope Valley presents no difficulty of importance. The difference of altitude from the head of Carson Cañon to the summit in the pass, measured by an aneroid barometer, is about 790 feet. The altitude above the sea is precisely the same as that of Red Lake Valley, and 750 feet lower than that of the eastern summit, on the old Immigrant Route. These altitudes may require some slight corrections, depending upon the variations of the thermometer, not yet fully determined, but are near enough for a comparison of different points.

The next route examined was the route from Bigler Lake Valley, past Slippery Ford, and down the South Fork of the American River, comprising a portion of Johnson's Cut-off Road, and a portion of the route along the South Fork Valley. Johnson's Wagon Route, after passing Slippery Ford, going westward, ascends the high ridge dividing Silver Creek from the South Fork, and continues along the crest of the ridge to Bartlett's Bridge. This part of the route, on account of its altitude, is liable to be obstructed by heavy snows in winter, and our examinations were therefore directed to the lower route—hitherto only used as a pack trail—along the valley of the Creek.

The most difficult portion of this route is encountered in the ascent from Bigler Lake Valley to the western summit, about 1,000 feet above the valley. The route lies along a very steep, natural slope, through a thicket of manzanita chaparral, interspersed with large and small boulders of granite. The present road attains the summit by a length of only three-fourths of a mile, or 3,960 feet, which gives a grade of over fourteen and a half degrees, or about three and a half to four times what it should be. In addition to the steepness of the grade,

the difficulty of ascent at present is increased by the presence of a great number of rocks. What has been done to the road already demonstrates, however, the practicability of obtaining a good grade by increasing the distance, and applying sufficient labor to remove the rocks. Most of the rocks can be removed without blasting. It will require about two miles of road to attain the proper grade. The expense of constructing a good road up this hill has been estimated from $6,000 to $15,000. I think it should not exceed the latter sum; before making a more exact estimate, I should prefer to make a careful survey of it with instruments. After ascending the steeper portion of the hill, the road rises by an easy, natural grade, about seventy-five to one hundred feet higher, making the total ascent about 1,100 feet. But there is a lower point about a mile south of the present road, where it is supposed the summit may be reached by an ascent some two hundred feet less.

Continuing westward from the summit, the road descends by fair grade through a valley of pines, and over good ground for a road bed about four or five miles, to a rocky cañon above Slippery Ford. The points of two low hills, covered with chaparral and heavy granite boulders, here close in upon the creek leaving no margin for the road. By removing the boulders, most of which are loose, a good grade can be had over the points of these spurs, and thence across the sloping rocks down to the trading post below the Ford. The distance of bad road here to be overcome, is about nine and a quarter miles to get a proper grade.

From this point, for five miles below, the grade may need improvement at some few points, and a few culverts should be thrown across ravines; but the road is at present a passable wagon road as far as the point where Johnson's Cut-off turns to ascend the high ridge. From this point a new road is proposed to be constructed, not following the narrow bottom along the creek (which is at places obstructed by solid spurs of rock for a quarter or half mile in succession), but maintaining a proper grade along the benches of the spurs, at an elevation above the creek of 100 to 300 feet, generally attempting to obtain a uniformly descending grade, but occasionally ascending or descending, as the case may be required, to attain a more favorable bench. At Sugarloaf Rock, about eleven and a half miles below Slippery Ford, the road descends to the bottom bordering the creek, and after passing along this flat for about two miles, again winds round among the benches of the spurs. At twenty-two miles below Slippery Ford, or at some point in this vicinity not yet determined upon, it is proposed to cross to the south side of the South Fork by a bridge, and ascend by an easy grade to the ridge leading down to Placerville.

The whole distance on this route from Cary's Mill to its junction with the present ridge road, would be about forty-four miles; of which, about thirty miles would need more or less expense to make a good road. Below Slippery Ford, the principal items of expense will be in side-hill grading and in erecting culverts and log bridges over the ravines. The details of these items can only be given after a regular survey.

It is claimed in favor of this route that it is a more direct route across the mountains than any other, there being only eighteen miles from Cary's Mill to Slippery Ford, below which the route lies through a valley; that it is less obstructed by snow than any other route, and can be passed in some seasons nearly all winter (as was the case during the last one); and in the more severe winters, it is open six weeks longer in the fall, and six weeks earlier in the spring than other routes through more elevated regions; and as the lower part of the route runs along the sunny slope of the hills in a sheltered valley, the snow is melted off from it soon after it falls, and is seldom over a foot deep. It is conceded that on both the summit portions of the route there will be deep snows, but that the dis-

tance from either of these portions to a lower sheltered valley on the road is only from three to four miles, which may soon be traversed by a traveler in view of an approaching storm. It is also contended that the short distance of deep snow will permit the route to be broken open by the travel at each fresh fall of snow.

As far as I have been able to gather testimony on the subject of the snow, the above views have been corroborated. The mail was carried on horseback over this route, with very few interruptions, once a fortnight last winter, between Placerville and Carson Valley.* It is also a just claim in favor of this route, that it will open a constant communication with the valley of Lake Bigler, which will doubtless be very extensively settled. As this valley and Lake Bigler will be divided by the boundary line, it will be important that prompt communication be had by the officers of the frontier counties.

It is urged by those opposed to this route and in favor of another, that it crosses two summits, when the true principle of engineering would admit the crossing of but one ; that the more difficult portions are exceedingly rough and expensive, and that the ground along the lower part is much broken, and requires much of the road to be artificially made. This latter objection I had at first thought to be a prominent one, but on a closer examination of the route, I found that, although the pieces of artificial road occur at frequent intervals, yet in the aggregate, much of the route requires little or no expense to place it on a par with ordinary county roads. I also found that most of the rocky points could be avoided.

On my recent trip to Red Lake I also examined the old Immigrant Road from Red Lake, over the western summit, past Tragedy Springs, Leek Springs and Alder Springs, to Taylor's Ranch at Cold Spring. In its present state this is a "hard road to travel," on account of the many rocks still remaining in the roadway, and on account of steep grades. These might be obviated with adequate expense ; but the principal objections to the route are : that it is very circuitous ; that it crosses the high western summit, which might be avoided and, consequently, that it detains the traveler a much longer time among the deep snows, and is utterly impassable in the depth of winter. It was opened, or very much improved, by the Mormons in the summer of 1850, since which time other parties have improved it at certain points. From the western summit, downwards towards the Sacramento, the route keeps as far as possible on the dividing ridge between the American River, and the Mokelumne and Cosumnes, and along the crest of this ridge there are many miles of good, smooth, natural road.

If there were not other shorter and more desirable routes, susceptible of improvement, it would be possible to make a very good road of this, so far as grade is concerned, but it would always be circuitous and impassable in winter.

Just previous to my last trip on the old Carson Route, an exploring party from Calaveras County, in the vicinity of Murphy's, had passed through Hope Valley and Carson Cañon, to explore a wagon route between Carson Valley and Murphy's. As I did not meet them, I had no means of knowing definitely where they had examined, except from casual information obtained through immigrant parties. I made, however, a short excursion up the upper and southernmost head of Hope Valley, some five to six miles above where the Carson road joins it, and on my return I have learned that this forms a part of their route. We crossed the summit between the head of the Hope Valley fork of Carson River and a tributary of the Mokelumne. The ascent on the north side was not difficult, nor excessively steep or rocky. A wagon might ascend it in its natural state. The

* Mr. Henderson states in his Report, that in February, 1855, he found in the passes and summits on this route, the snow was about one foot and a half deep, and the first thirty-six miles (that is, the western thirty-six miles), the ground was bare.

elevation was apparently as great as that of the western summit on the old Carson route.

Further south, over a low ridge, we could discern the two lakes mentioned in their report, and the route appeared not to be rough, but at a distance the cañon of the Mokelumne river seemed to be deep and rugged. Not knowing the precise route they had passed over, and having no sufficiant party for the purpose, I returned.

In summer I have no doubt a good road could be made over that portion which I could see; but the earth had the appearance of being much covered with deep snows in winter. My principal objection to this route is that it traverses the mountains too much in a line parallel with the main ridge, and it must consequently be much obstructed in winter. I have no doubt it would be an excellent route for stock in summer. It is proposed to terminate this route, like several others, in Carson Cañon.

As the result of my explorations, of all the routes examined I should select only two as requiring a full and accurate survey to decide upon their respective merits. These two are the Slippery Ford route and the Red Lake route as proposed to be modified by Dr. Bradley. If these two routes are to be regarded as summer routes only, and a decision is to be made on principles of engineering alone, I should not feel able to decide between them without a careful survey of both; but if the obstructions from snow are to enter into the argument, and it is deemed important, even with some additional expense, that a route shall be selected with a view to winter as well as summer travel, then, perhaps, it may be deemed necessary to survey but one route, and put that immediately under contract.

All estimates of expense, until the proper data are obtained from a survey, are necessarily conjectural. The same remark will apply to distances, as the improvement of grade will increase the distance. Forty to forty-five miles will, I think, be the limit of length of road to come under the supervision of the State, of which not much over half will need any expensive improvements. The estimate will also depend much upon the quality and extent of the improvements which it is decided to apply to the road. What one man would term a good road, might be deemed a very poor one by another. A road which an immigrant might get through upon with a light load, might not answer the purposes of a teamster hauling goods to Carson Valley and Salt Lake. As regards grade, the facilities for procuring a low or an easy grade, are much greater than I had anticipated, and I deem it quite practicable to construct a road across the mountains at a maximum of four degrees, and quite probably at two or three degrees in many places. It is quite practicable to make such a road across the mountains, that a teamster, having hauled a maximum load over it, would be obliged to unload one-third or one-half of it, before he could pass over some of the roads between Sacramento and Placerville. The cost of improving either of the routes named above for survey, I consider need not exceed $100,000; and the limit can be varied from that down to $30,000, according to the nature of the improvements determined upon.

I had hoped to be able to illustrate this Report with an accurate map, and had indeed commenced its preparation, but I find that many of the data requisite for its completion remain in the mountains in the note books of Mr. Goddard; many require considerable time to digest, and others are yet to be obtained by the astronomical party, and also by the U. S. Surveyors. The surveys of the road will also add many precise data for the map. At the close of these surveys, we shall have the data for constructing a more accurate map of the mountain region south of Lake Bigler than any that has yet appeared. A valuable list of altitudes, taken both with the barometer and the theodolite, is also in preparation.

In the mean time, I must refer you to a rough sketch of a map which I made after returning from the Georgetown exploration, which I have altered in some particulars, and marked thereon the various routes explored.

An engineer, before making an estimate of the cost of improving a road or constructing a new one, usually desires to have a plan of the route, with distances, grades, side slopes and streams distinctly and definitely marked upon it. This we have not yet. It is the very thing proposed to be entered upon *preliminary* to the estimates.

I submit the above views with much reluctance, in consequence of not having precise measurements, upon which to base a calculation of cost and distance. Should the survey of either route be actually made, the facts can then be presented in a satisfactory form.

I have the honor to subscribe myself, with respect,
Your obed't serv't,

SHERMAN DAY.

Sacramento, 20th Sept., 1855.

3. HON. SHERMAN DAY'S REPORT ON WAGON ROAD SURVEY.

Hon. S. H. Marlette, Surveyor-General:

Dear Sir:

On the 12th December last I transmitted to you, from Slippery Ford, a report of the progress of the survey of the Immigrant Wagon Road, as far as that point, with an estimate, somewhat hastily made, of the cost of the construction of the eastern portion. On the first page of that report I gave a synopsis of the distances of the five divisions of the road, then surveyed, with a brief description of the course of the line. A copy of that synopsis I herewith annex, to save repetition.

I there noted that, of the six miles in the fifth division, from Johnson's Summit to Slippery Ford, (six miles,) only one mile had been located. This was on the 12th December. We remained there two days longer, and surveyed an additional half mile, eastward from the summit of Slippery Ford Hill, as far as the upper side of the next spur that closes in upon the river; and we also completed the location of the unfinished portion at Slippery Ford House, making, of the six miles between Johnson's Summit and Slippery Ford, one and two-thirds miles of line surveyed, and four and one-third miles unsurveyed. As I had become quite familiar with this four and one-third miles during the previous summer, and knew that much of it was flat meadow land, and some of it gently rolling land along the side of a stream, and none of it difficult or impracticable, I thought it better to defer the surveying of it until spring, the snow being now about fifteen or eighteen inches deep. This depth of snow did not render it *impossible* to survey any portion of the line, but it rendered it quite inconvenient for the party to travel daily so far from camp and return again at night, leaving but a short time to spend in surveying.

While at that camp we also surveyed the line below Slippery Ford, for 7,679

feet, or 1 45-100 miles, as far as the upper end of Strawberry Flat. This portion of the line is over ground generally smooth and of easy grade. Below the termination of that surveyed line, the route continues for one or two miles along a level flat, except where one small spur closes in upon the river. We might have continued our survey without interruption, below this point, if our supplies of provisions had reached us, according to previous arrangements. But after waiting two days beyond the appointed time, and reducing our stock to a supply for two days only, we were compelled to leave camp at Slippery Ford, on foot, and march through the snow to a new cabin which Mr. Kirk had ordered to be built for us, about twelve or thirteen miles below, on the South Fork, at the eastern end of Sugar Loaf Flat. This place we called Sugar Loaf Cabin. It is below the point at which deep snow is found, on the lower and southern slopes of the ridge.

Fearing that I might not be able to complete the continuous location of the whole line, before the close of the year, I determined to survey the most important and difficult points along the South Fork, in detached portions, if necessary, and estimate the more easy portions by my general knowledge of the route, acquired on several trips last summer over the route.

Commencing the South Fork line, near Sugar Loaf Cabin, we ran a line up the river winding along the side hills at an altitude generally of 100 to 300 feet above the river. We continued this line in all 4 59-100 miles, or 24,246 feet. It passes below Cottage Rock, but not very near to it, and beyond that crosses the large creek and cañon, descending from Silver Creek Ranch, and turns round the point of a high spur at the foot of a rocky ledge. The line up to this point is nearly all along side-hill slopes of various grades, usually with an earthy or gravelly bed, but occasionally encountering large boulders, or some bed-rock near the surface. It may be considered about as expensive as Carson Cañon, or the rougher portions of Hawley's Hill and Luther's Pass. We found it necessary to survey several lines on some portions of this division, before determining upon the proper location.

On account of the obstruction from snow, and the distance from camp, we abandoned the further prosecution of the survey up the river, leaving an interval unsurveyed from here to Strawberry Flat of about six and a half miles. The point at which we stopped is about two miles below the junction of the river trail with the ridge road passing Silver Creek. There is no doubt about the practicability of this unsurveyed portion, and at an easy grade. Four and a half miles of it is already used for a wagon road. As the snow—about fifteen inches—prevented our observing the precise character of the ground, it was thought best to leave the location of the line until Spring.

Recommencing at the former point near Sugar Loaf Cabin, we ran the line down across the flat in front of Sugar Loaf Rock, which is about a mile below the cabin, and about sixty feet above the level of the river. Having passed the rock, the line rises gradually as it turns round the spurs putting out from the base of Pea-vine Hill. At about 4¼ miles the line had attained a hight of about 600 feet above the river, and passed round the foot of a rocky ledge without cutting into it. Below this point near the bank of the river we built another cabin, to which we gave the name of Cedar Cabin, and removed our camp to it.

On my recent trip to this city, I had passed between Cedar Cabin and Brockliss' Bridge, a distance of some twelve miles, both along the spurs about one hundred to two hundred feet above the river, and also about half-way up the side of the main ridge, above the origin of most of the small spurs and ravines that shoot down towards the river. Occasionally a larger ravine or cañon obtruded past this upper line, and extended towards the crest of the main ridge. It appeared to me that this upper line, if it did not encroach too much upon the snow line, would present a smoother line than that along the river, and avoid several of

the sharp, rocky points and little gulches of the lower route. The river route, however, would probably be shorter, and present a line with less ascent and descent. It was my intention, therefore, to have two lines run, diverging from Sugar Loaf Flat: one following the upper line, near the snow line, and the other the river route, as far as Brockliss' Bridge.

When I left the party on the 5th of January, they had progressed on the upper line about one mile below Cedar Cabin, and the prospect for a good line ahead was quite favorable. The last mile run encroached slightly beyond the line of snow, but only to a depth of six inches to a foot in the most shaded positions.

Between Sugar Loaf Cabin and Cedar Cabin, the upper line crossed very few points from which the snow was not melted.

Of the ten miles surveyed along the South Fork previous to my departure, the portion above Sugar Loaf Cabin is the most difficult and costly, although I do not know of any one mile there that should be more costly than the slope of Johnson's Hill or Slippery Ford. Several rocky points, but not of great length, are passed, and many short, steep ravines. The line below Sugar Loaf Cabin is about on a par with that along Hawley's Hill, and the lower part of Luther's Pass.

It has been impossible for me, amid the incessant labors of the field, or during my hurried journeys to this place to review the field notes of the line, so as to present herewith an accurate estimate of the route as far as surveyed; nor would such an estimate be of much value until the remainder of the line to, and below, Brockliss' Bridge, is completed. A more full report will be presented when the notes of the whole survey can be reviewed, and maps and profiles may be made from them.

I left the completion of the remainder of the line in charge of Mr. Thomas J. Arnold, my Assistant, who is fully competent to the task, and to whom I have communicated my views on the subject. He will probably be able to finish the survey in about three weeks. On my journey down, along the river route, I encountered scarcely any snow; and as snows have fallen very copiously this winter, I presume it is a safe conclusion, that the southern slope of the lower half of the main ridge, along which our survey line extends, is generally free from snow all winter.

It may, perhaps, be due to myself and the party with me, to render some reasons why the survey has occupied so much time. One reason was, that the survey having been commenced at a late period, we were more interrupted by cold, snow and storms, than we should have been in summer. The want of ample pecuniary means, or of undoubted credit, by which to obtain supplies, teams and men, at proper times, and in sufficient force, tended greatly to interrupt and retard our operations. Another, and, perhaps, the chief reason, is that much of the route was of that peculiar nature, that, although one could see easily by a general glance at the locality, that the proper route was somewhere about there, yet it often required two, sometimes three, experimental lines to be run before the final location could be determined upon, that would properly connect all the points.

As far as practicable, observations with the aneroid barometer and thermometer, have been continued along the line, and comparisons made of the barometric with the measured altitudes. On one night in Hope Valley, in November, the thermometer reached a degree of cold 18° below zero. These observations will be more carefully collated and reported hereafter.

I remain, Sir,
Very Respectfully,
Your obed't serv't,

SHERMAN DAY.

Slippery Ford, 12th December, 1855.

Distances and Divisions from the Eastern Terminus of the Wagon Road to Slippery Ford.

FIRST DIVISION.

The eastern terminus of the Road is in the Carson Cañon, at a point 1⅔ miles south-west of Cary's Mill. The first division extends from this point to Station Z, at the head of the Cañon, and on the east edge of Hope Valley. Distance by the graded line in miles 4·33

SECOND DIVISION.

From Station Z. around the northern end of Hope Valley, and over Luther's Pass, and along the north bank of Marlette's Flat, to Station 35 at the outlet of the flat. Distance by graded line 4·95

THIRD DIVISION.

From the outlet of Marlette's Flat, along the north bank of the outlet stream for about 1 mile, then crossing the stream three times in descending Hawley's Hill (on the east side of Lake Valley), crossing the south-west branch of Truckee River, to Station 124 at the foot of Johnson's Hill. Distance by graded line..... 4·16

FOURTH DIVISION

Comprises the steep eastern slope of Johnson's Hill, from Hope Valley to the summit. Distance by the graded line 2·00

Total of connected line actually located 15·44

FIFTH DIVISION.

From summit of Johnson's Hill to Slippery Ford House, (of which there has been located 1 mile, at and near Slippery Ford to the top of the hill,) estimated from Henderson's survey at, miles 6·00

Total distance from eastern terminus to Slippery Ford..... 21·44

Note.—Since the above was transmitted, the amount of located line east of Slippery Ford, forming part of the above 6 miles, is 1⅔ miles—leaving 4⅓ miles on the summit unsurveyed. Also, about 1½ miles were located below Slippery Ford House.

REPORT OF A SURVEY

OF A PORTION OF THE

EASTERN BOUNDARY OF CALIFORNIA,

AND OF A

RECONNAISSANCE OF THE OLD CARSON AND JOHNSON IMMIGRANT ROADS OVER THE SIERRA NEVADA.

REPORT.

Sacramento, Dec. 15th, 1855.

To the Hon. S. H. Marlette, Surveyor-General:

Sir:

I have the honor to submit the following Report of the Survey, intrusted to my charge, and carried out, as near as circumstances permitted, in conformity to the following instructions received from you:

"Surveyor-General's Office,
Sacramento, Aug. 3, 1855.

Sir:

As you are now provided with the necessary men, animals and instruments, you will proceed without delay to Placerville, *en route* for Carson Valley. At the former place you will determine the latitude and longitude, and the rate of your chronometers, by astronomical observations, and by comparing your chronometers and local time with those of San Francisco, which you can readily do, by means of the Telegraph lines which have been kindly placed at your service for this purpose.

From Placerville to Carson Valley, *via* Cold Spring Ranch and Carson Pass, you will take such barometrical observations as will enable you to construct a profile of the route. You will also take, so far as practicable, a somewhat accurate sketch of the country traversed, and collect such other data as in your opinion will be of service in comparing the merits of this with other routes, for the Immigrant Wagon Road, in respect to both practicability and economy of construction.

At or near Carson Valley you will determine, astronomically, with some precision, the position of the eastern boundary of the State; and I would suggest that such portion of the State line as shall fall in Carson Valley, or so much of it as you may deem necessary, be measured and defined with tolerable accuracy, in order that it may be used as a primary base for the determination, trigonometrically, of the position of such points as it may be found necessary to determine for the purpose of connecting our surveys and explorations, and for fixing the eastern terminus of the road.

Somewhat durable and conspicuous monuments should be erected at the termini of the primary base, and perhaps at the extremities of some of the secondary bases, from which shall be taken the bearings of the prominent and well defined peaks and other objects of the Sierra Nevada, and other mountains, and of the adjoining country, of which you may obtain a view.

The men and animals provided you, have been furnished by Judge Hyde, of Utah Territory, who will provide all the assistants and provisions requisite, after you leave Placerville until you return to the same place.

On what route you had better return I have not decided, but this is of no consequence, as I intend meeting you in Carson Valley, but should I not do so, you will consult with the Hon. Sherman Day, with whom you will probably meet in that vicinity, and return by such route as in his judgment will most facilitate the selection of the most practicable and economical route for the Immigrant Road.

You will, of course, take the same observations coming as going, so far as practicable.

Inform me of your progress as often as you shall find it convenient to do so, and oblige,

Very respectfully, your obedient servant,

S. H. MARLETTE,
Surveyor-General.

Geo. H. Goddard, Esq., Civil Engineer," etc.

Previous to the receipt of the foregoing letter I had, according to your instructions, collected together the several instruments and other requisites for the expedition, and had progressed considerable with the preliminary observations.

The following is a list and description of the instruments provided and used on the Boundary Survey:

An Altitude and Azimuth Instrument, by Parkinson & Frodsham, of London: with horizontal circle twelve inches in diameter, divided to ten minutes, and reading to ten seconds, by the verniers, with a vertical circle sixteen inches in diameter, divided to five minutes, and reading to five seconds, by the verniers; the telescope had four feet focal length, with a three-inch object-glass, and two eye-pieces, with magnifying powers of 120 and 180 times. The Instrument was supported on a central pillar, and the telescope revolved at one extremity of its axis, by which it was more adapted to astronomical than to geodetical purposes.

A very fine 6½-inch Theodolite, of English make and usual construction.

One large Chronometer, by Dent, London, No. 1,946.

One small Chronometer, by Parkinson & Frodsham, of London, No. 1,628.

An Iron Cistern Mountain Barometer, by Green, of N. Y., divided on the tube.

An Aneroid Barometer, by James W. Queen, No. 264, Philadelphia.

One Marine Opera Glass.

One Thermometer.

The above instruments were provided by you as the property of, or hired by, the State; in addition to these, I used the following instruments of my own:

A Sextant of 7-inch radius, by Hughes, of London, divided to ten minutes, and reading to ten seconds.

Two Artificial Horizons, with quicksilver troughs.

A Surveyor's Compass, by Young, of Philadelphia.

A Prismatic Compass, by Schmalcalder, of London.
A Camera Lucida, by Chevallier, of Paris.
One small Thermometer.
A Telescope and a Pocket Compass.
William Herrick, Esq., of the *Alta California* office, San Francisco, kindly loaned me a Borda Reflecting Circle, with Troughton's improvements.

It being desirable to connect the proposed survey with the geographical position of Sacramento, a small observatory was erected on the building occupied as your office, and the Altitude and Azimuth Instrument was set up and adjusted to the plane of the meridian. The tremulousness of the ground, however, upon which Sacramento is built renders it an unsuitable place for astronomical observations; and those taken for latitude, longitude and time, were somewhat uncertain.

Previous to leaving Sacramento I compared my Greenwich time with that at San Francisco, by means of the Telegraph, which was obligingly placed at our disposal by its liberal proprietors.

The transmission at San Francisco was attended to by Mr. Charles Pace, chronometer maker; and the time sent was that deduced from Anderson & MacGregor's transit observations, at their observatory on Telegraph Hill. The results of this comparison will be found under the heading "Astronomical Observations."

I had much desired to have had the chronometers carried, in the way they were to travel, for a few hours daily, before leaving Sacramento, in order to have an opportunity of rating them when in motion, but it was judged best not to delay our journey on this account.

The men sent by Judge Hyde to form my party were as follows:

Christopher Merkley, of Great Salt Lake City.
Seth Dustin, " " "
George W. Hancock, " " "

The two latter performed the journey on foot, carrying the chronometers and barometers; the former were packed in hand-baskets, well stuffed with wool.

PLACERVILLE, ALTITUDE 1,755 FEET.

On the 4th of August I started my party for Placerville, with the pack-animals and camp baggage, and on the following morning I took stage with the instruments.

The readiness shown by the aneroid at several points on the road, will be found under the Meteorological Observations, and the altitudes deduced therefrom, in the table of Altitudes.

In the evening my party, which I had passed on the road, arrived, and I was glad to find the chronometers appeared to have traveled thus far without injury.

It had been my intention to have selected for an astronomical station, a commanding point of view on one of the hills above the town, from which I could have seen the leading mountain peaks on the head waters of the American River and other well known objects. With the intention of selecting such a place, the morning after my arrival, accompanied by Messrs. Cary and Lyon, I walked round the hills forming the divide between the Placerville waters and those of Weber Creek, as far as the aqueduct on the South Fork Canal, at the head of Cedar Creek. I, however, found no site that would have answered, without clearing away a great deal of timber that interrupted the prospect. Perhaps the most favorable one for the purpose, is the point of the hill some 300 yards to the left of the

has retained them, whilst the rest has been washing away. The tunnel miner of the present day is but doing that which nature through her countless ages has been doing before him on a larger and on a grander scale. The wide, extended, auriferous, sedimentary deposits, which she has left in tact, are now becoming the great fields of enterprise, and are yielding their harvests of gold to the persevering miner.

I gathered some few flowers here, which, on my return, I submitted, with others gathered on the journey, to Dr. Kellogg, of San Francisco; a list of which, with their botanical names, will be found at the end of this report. It was too late in the season, however, to obtain many.

We were, as you are aware, detained somewhat by want of funds, and difficulties thrown in our way, by those to whom I had been directed to look for assistance. However, on your arrival, all these matters were finally arranged and I was supplied with the provisions, camp equipage and extra animals I required. There being considerable risk in carrying the altitudes and azimuth instruments on a pack mule, I endeavored to procure a light wagon for the transport of all our instruments; such, however, was not to be found in Placerville, and Mr. Kirk lent his buggy, with one horse, for the purpose, and a second was obtained from Mr. Ferrel, who agreed to accompany us and take charge of the extra animals.

As the time approached at which the U. S. District Court was to hold its session for the Western Division of Utah Territory, Judge Hyde impressed upon me the necessity of proceeding on our journey without further delay, so as to determine whether Carson Valley was legally under its jurisdiction. Elder Hyde, who had been appointed Judge of Carson County, had been withheld from opening his Court, and issuing the election proclamation, from the uncertainty as to which side of the boundary line the valley might lay. The Judge had rendered me much valuable assistance during my operations, and had delayed his own journey to accompany us on ours.

I had determined to fix some point near the 120th meridian, before descending into Carson Valley, from which I could locate the position of the leading peaks of the Sierra, in relation to the boundary line; and for this purpose I intended to camp, for a week, on or near the dividing ridge, in some suitable locality. As this arrangement afforded Mr. Day a further opportunity of examining the Clear Lake Fork of the American River, up which Dr. Bradley's proposed road was to be located, he determined to accompany me as far as the summit.

On the evening of the 26th August we started from Placerville. Our party, as finally equipped, consisted of the three men before named, and Mr. Ferrel, Elder Hyde and the Hon. Sherman Day. To transport ourselves, instruments and provisions, we had a buggy with two horses, two riding horses, and the two pack horses and mule originally brought from Carson Valley.

HAWLEY'S, ALTITUDE 2,674 FEET.

A bright moonlight evening's ride of seven miles, brought us to Hawley's, where we made our first Camp,. From Cary's Hotel the town stretches up the valley for nearly a mile. The Immigrant Road, after crossing the Placerville basin, ascends the ridge to the north-east by a long but easy hill; this ridge divides the Placerville waters from those running more directly to the South Fork of the American. Here it may be said the forest begins, as up to this point the pines have been scattering and intermixed with oak. In the ascent of the Sierra every district is particularly marked by its vegetation. On the foot hills the white oak is spotted over the country in considerable numbers, yet never sufficiently so

to assume a forest character. These trees, from their stunted and rounded forms, always appear as individuals, and in however close proximity they may be, they never combine to give a woodland character to the scenery. The flex, or live oak found in the same localities, and more abundantly near the streams, contrasts its dark foliage and black bark, to their light foliage and white branches. Its ancient and highly picturesque forms add considerably to the beauty of the landscape. On attaining about 1,000 feet elevation above the sea, the first of the pines is met. The *Pinus Sabiniana*, a tree which in form almost appears to be a link between pines proper, and deciduous trees. Its foliage is of a silver green color; the nuts it bears are used as food to a large extent by the Indians, who are said to prefer them to any other pine nuts. This tree scarcely reaches to an altitude of 2,000 feet, except in the more southern portions of the country; but it is more than replaced by the pitch-pine, (the *Pinus Brachyptera*,) which, for another 1,000 feet, is the leading tree. The white oak, at this elevation, is seldom seen. Several other varieties of oak found lower down, have also disappeared, but a black oak, with straggling branches, still represents the family. The timber of this tree is hard and durable, but too crooked to be of much service except for fire-wood. The balsam-fir (*Pinees Balsamia*) also grows to some extent in the pitch-pine district. On attaining an elevation of 3,000 feet the sugar-pine (*Pinus Lambertiana*,) the pride of the California forest, is first found. This truly magnificent tree becomes, as we continue to ascend, the chief tree of the forest. It has been so often described, that I only allude to it here in its character of marking a particular elevation, from 3,000 to 5,000 feet above the sea. With this tree the white cedar, or *Libocedrus Decuneus*, is associated; and in the higher portions, the spruce-fir.

The total rise from Placerville to Hawley's is upwards of 900 feet, and one-half of this is made in the first ascent to the ridge. After which, the ascent is very gradual, and could be made much more so if required.

We camped at 10 P. M. under a group of cedars, when Mr. Day and myself took some observations for latitude and azimuth, and set the theodolite on an approximate meridian. Later in the night, I got a meridian transit of Polaris.

The following day being Sunday, we remained in camp. I obtained observations for time, and also bearings from an open point on the ridge of some of our known localities. The forest, however, was too thick to be able to see much from any one point.

August 27.—This morning the camp was moving early, and we made a good start. The road continues along a ridge generally rising, although there are some slight undulations.

SPORTSMAN'S HALL, ALTITUDE 3,246 FEET.

About 3½ miles brought us to the Sportsman's Hall, where there is a steam saw mill doing a large business. The barometer gave a rise of 570 feet from Hawley's. The ridge from Hawley's having headed, the Placerville Creek becomes the divide between Weber Creek and the streams flowing northwards into the South Fork of the American River. The forest becomes more dense and imposing as we ascend, the pines larger and taller; the sugar-pine has outnumbered the pitch-pine; the fir begins to show itself. The latter and the cedar have their trunks very frequently covered by a bright pea-green moss, which has a very striking appearance; it does not appear to grow on any of the other forest trees. In continuing up the ridge, some few sharp ascents occur, which however could all be avoided should a new road be laid out along the ridge.

FORKS OF ROADS, ATLITUDE 3,942 FEET.

Four miles more, with an ascent of about 700 feet, brought us to the junction of the old Carson or Ridge Road and the Johnson or Cut-off Road. The latter descends to the north and crosses the South Fork at Bartlett's Bridge, some 1,400 feet below this point.

We continued along the Carson Road, which here bends off considerably to the south-east and descends some 200 feet in the next two miles. This is the low depression in the ridge which is seen at the head of Weber Creek, from Placerville Hill, and over which Pyramid Peak and its group are seen in the distance. Here the Diamond Springs Road branches off on a divide to the south.

TAYLOR'S, ALTITUDE 4,517 FEET.

About 9½ miles further we arrived at Cold Spring Ranch, finely situated on one of the heads of Sly Park Creek, and at the foot of Iron Mountain. From the low depression spoken of to this point, there is a rise of 780 feet, exclusive of several ascents and descents of the ridge which there is no necessity to traverse. The house is about 200 feet below the summit of the divide at the foot of Iron Mountain. From Placerville to this point there is one of the finest ridge roads that could be desired. The total distance, 25 miles from Placerville, with an absolute rise of 2,760 feet, as given by the barometer—which would make the top of the divide at the foot of Iron Mountain, about 3,000 feet above Placerville. A road of a continuous grade could be laid out along this ridge, but for railroad purposes it would be too steep—120 feet to the mile. The increased distance might reduce it to about 100 feet; and this, let it be recollected, is usually and justly considered the easiest and best part of the road. At Taylor's, or Cold Spring Ranch, one of the difficulties of the old Carson Road occurs. The ridge now makes an abrupt rise, up which the road continues at a very steep grade. This ascent is known as Iron Hill.

It is at the foot of this hill that Dr. Bradley's proposed new road turns off on the northern slope of the divide, crossing or heading round Plumb, Wolf and Alder Creeks, and continuing as near a uniform grade as the nature of the country would admit of, to the Clear Lake Fork of the South Fork of the American River. The great object of this route was to avoid the steep hills and elevated ridges of the old road, which for so large a period of the year are buried deep in snow. This proposed road traverses some fine valleys, and has good feed along most of its course. It would be a great improvement on the old road, besides materially shortening its distance; but being for the most part on the northern flank of the mountains, and at a high altitude, I fear it would not have those advantages for a winter road which have been contended for.

After taking bearings to all the prominent points around, we resumed our journey and proceeded some 4½ miles further, ascending Iron Mountain and continuing along the ridge which headed round Sly Creek to the south and Plumb Creek to the north. Unfortunately, the men had gone ahead while Mr. Day and I were taking observations at Taylor's, and I was thus deprived of noting the barometer on Iron Mountain and this portion of the ridge.

CAMP SPRINGS, ALTITUDE 5,497 FEET.

It was above an hour after dark when we got to Camp Springs, where we found our party encamped, and also Mr. Taylor, who was returning from the Sierra

with a wagon-load of snow for the Placerville market. He gave us a great deal of information on distances, etc., along our route.

A great improvement on the present road up Iron Hill could be made at small expense, by cutting a road round the side of the mountain and coming out on the divide at the head of Plumb Creek. The distance might be slightly increased, but not much, and the grade need not exceed 200 feet to the mile. There is a low depression in the ridge at the head of this creek, the descent into which by the Ridge Road would be thus entirely avoided. The first mile out from Taylor's makes a rise at present of not less that 700 feet, and perhaps more. This is an improvement I would strongly recommend, as it would avoid a very bad hill.

On the moon rising, Mr. Taylor left us to continue his journey. He reported the mountains as freer from snow than he had ever known them before. I procured some good observations of Polaris for latitude. The night was very cold, with a heavy dew. The distance traveled to-day was twenty-two miles; our altitude by the barometer, 5,497 feet.

After passing Taylor's Ranch, the character of the forest altered much. Its air of luxuriance was gone. Sturdy, tough and of slower growth, few trees reached 150 feet on the ridges, though in the bottom of Camp Creek, to the south, fine timber still appeared.

August 28.—Before starting I obtained observations for time. Camp Springs is on the southern slope of the ridge, half a mile from the divide, and falls towards Camp Creek, near which there is another branch of the Carson Road, which diverges from this on Iron Hill, and re-enters it a few miles higher on the ridge. It is used by drovers, from being well supplied with grass and water.

Immediately on starting, our road re-ascended the ridge, at which point we we took bearings on Pyramid Peak and several other points. The ridge continued for some five or six miles to the north-east and east, to the head of Camp Creek. In this distance there is a rise of 950 feet, but the road is good and all the ascents easy. Alder Hill rises abruptly at this point, and is another of the bad points on this road. This hill is composed of white granite, and the road ascends it between large boulders and masses of rock. The ridge from Taylor's to this point is composed of gravel and pebbles, belonging to the conglomerate which overlies the granite. Occasionally large boulders of granite are met. Here, however, the white granite country is entered. From the summit of the first bench of Alder Hill, a very fine view is obtained of the tributaries of the South Fork and the mountains beyond. This mountain forms the head of Alder Creek to the north and Camp Creek to the south. The road, after having ascended a second bench of the hill, descends again about 200 feet to Leak Springs, which are in a valley, tributary to the Cosumnes; from the summit of Alder Hill to Leak Springs, the distance is about a mile, and the course south. This portion of the road might be improved by a sidling road being carried from the head of Camp Creek round the hill towards the south, and passing over the ridge into Leak Spring Valley, at a lower point. The road would then be comparatively easy.

From this place the road still continues in a southerly direction, passing on the south-west side of the divide, and across it again to the head of a stream running to the South Fork of the American; indeed, in this part of the ridge, the streams on each side interlock each other so as to destroy its ridgelike character altogether. At this point we first enter the true breccia formation, which is so largely developed in the Sierra Nevada, and forms so much of its forest scenery. This rock is composed of angular fragments of older rock cemented together with a substance harder than the rocky fragments themselves; red and gray porphoritic rocks appear to compose its principal mass, yet many other rock enter into its composition; often boulders or fragments of white quartz are to be found, and on some of the most elevated peaks, I have taken out petrified wood, which, from my ex-

perience, I should say is very abundant in this formation. I may here point out one of its remarkable features, that the breccia formation is *never found in the valleys*, except as a huge fragment which has rolled down from the hights above, and wherever it occurs it overlies the granite and forms the *upper portions of the ridge*, often cropping out in long extended horizontal steps around the upper benches of the hills. It bears the appearance of having been once a continuous formation, which has overspread this part of the country to a considerable extent, and that the portions which now exist are merely the fragments left by previous convulsions of nature. Whether this rock is a true volcanic breccia which has flowed in a more or less fluid state from a volcanic crater, or merely a highly metamorphic portion of the conglomerate formation, which is as extensively developed on the lower hills, there is, I believe, not yet sufficient evidence to prove; but as I shall have occasion to refer to this rock repeatedly on our journey, I shall proceed with the description of the route.

From the head of the creek last alluded to, the road bends round the north flank of a rough breccia hill for about a mile, coming out on the ridge again at a depression, where the rock is of white granite ; a fine open valley, with a large flat, lies to the south, falling away very gradually toward the Cosumnes. Indeed, in this part of the ridge, the difference between the slope of the country to the north and south is very striking. While the country descends with smooth and easy steps to the south, it falls away most precipitously to the north. This portion of the Ridge Road is very good ; the junction of the Volcano Road is soon reached; the latter appears to follow up a very smooth and even ridge, which is said to form the divide between the waters of the Cosumnes and Mokelumne rivers. The views obtained to the north are very grand ; all the creeks falling to the American have broken up the country in the roughest possible manner, while beyond them Pyramid Peak towers aloft, forming a magnificent back ground to one of the most striking scenes on the road.

TRAGEDY SPRINGS, ALTITUDE 7,512 FEET.

Some three miles more brings us to Tragedy Springs, which are situated at the head of one of the branches of the Mokelumne River. Mr. Day and myself took bearings to the prominent points from the ridge above our camping ground, and in the evening we obtained observations for latitude. This place owes its name to a party of California Pioneers of the Volunteer Batallion, who were barbarously murdered here by the Indians in 1849 ; their graves are to the right of the road in descending the hill.

August 29.—While the train was packing this morning, Mr. Day and I again ascended the ridge and completed the observations commenced last evening. A fine view is obtained here to the north-east. Silver Lake lies more than 1,000 feet below, embosomed in white granite hills and fringed round with dark pines. On its east rises a lofty range of dark volcanic mountains, which forms the spur over which the Carson Road passes, and which terminates to the north at the two remarkable thimble-looking obelisks of black rock, which are seen from so many points of the old road. On returning to camp, I obtained observations for time before starting.

Immediately on leaving camp, the road led us up a rather steep hill, from which a trail to the left makes a short cut across by Silver Lake to the lofty pass of the Carson Road, and saves a detour of several miles which the Wagon Road here makes. The distance across is said to be seven miles, while round by the road it is thirteen ; this saving is however more than made up for in the extra descent and ascent on the trail. The Wagon Road, which we followed, continues to the south and descends into a valley of the Mokelumne, down which and over some pretty flats it continues for a mile to the south-west, passing several

small sheets of water. This valley is confined on the eastern side by a rough and barren breccia range of cliffs, through a low gap in which the road passes over into another valley which stretches away to the south. The rock forming the bottoms of both these valleys is white granite. The breccia summit of the intervening ridge appears to be wholly superimposed on the granite. The road keeps up this valley at the foot of the breccia, and is for the most part good; at length crossing over to the eastern side, it ascends the ridge by a long but easy ascent. On reaching the summit, we found ourselves on a narrow divide, having a large open valley to our east, which appeared to contain fine pasturage. In various places along the summit of this ridge fragments of breccia remain, but the greater portion of the ridge is of white granite. We had now attained an elevation of 8,200 feet, and were evidently fast approaching the summit. A strong, cold south-west wind depressed the barometer, as we continued to ascend, more than was due to the difference of altitude.

We passed over a breccia point of this ridge, which commanded a very extensive view of the mountains to the south-east. Two lofty, double headed peaks of the central ridge of the Sierra lay to the east, the southern of which I recognized as that pointed out to me from near Walker's River in October, 1853, by my esteemed friend, the late lamented Major Ebbetts, whose untimely end* has delayed the exploration of the pass discovered and named after him, and which, there is reason to believe is the lowest and most suitable one for the Pacific Railway in the central portion of California. This pass lies a little to the south of this Butte-like mountain, and is on the head waters of the main branch of the Mokelumne River. Major Ebbetts, with a large prospecting party, had crossed it in the month of April, 1850 or 1851, and found it at that season free from snow, while the mountains on either side were totally impassable.

I recognized also several other well known peaks, one of which was a lofty castellated peak south of the Sonora and Walker River Immigrant Road named the Castle Peak, and whose position I had determined when on the Railway Exploration under Lieut. Moore, U. S. A., in 1853. I availed myself of the present opportunity of connecting the surveys together.

As we approach the pass the scenery becomes more grand and imposing. The ridge which the road follows is very narrow, and falls away precipitately on either side into deep cañons ; those forming the heads of the North Fork of the Mokelumne are of white granite, and apparently totally impassable.

WEST PASS, ALTITUDE 9,036 FEET.

By 4 P. M. we reached the summit of the Great Carson Spur, which being the highest point on the Wagon Road, is generally called Carson Pass, although, in reality, it is not on the divide of the Sierra. This great spur is the range of dark volcanic rock seen from Tragedy Springs. It branches off from the main Sierra near the head of Hope Valley, and running south-west for four or five miles, turns abruptly at this point to the north-west, and terminates at the Thimbal Rocks, before named. It is composed of breccia, or volcanic scoria, having occasionally dykes, or domes, of compact lava, or basalt, in its mass. This rock forms a large portion of the summit ridge of the Sierra, from the Sonora to the Carson Pass, but as we shall see, reaches but a short distance north of the latter. Its cliffs, blackened by age and exposure, contrast finely with the brilliant white granite hills and valleys below, which are always dotted with pine, while the former are every where barren. Now is the contrast less striking in form, as well as in color, be-

* He was lost in the blowing up of the Secretary on his way to Petaluma, in May, 1854.

tween these granite mountains, whose boulder-like masses are too much cut up with detail to allow them to form the same grand and majestic outlines exhibited by the breccia mountains, whose curved bases, precipitous sides and turretted escarpments, are crowned with castellated summits of gigantic proportions. Indeed, wherever this rock appears, it adds much to the wildness and grandeur of the scenery. The culminating point of the road was 9,036 feet above the level of the sea.

There was a conical peak of the mountain just above and to the east of the pass, from which I determined to take a sketch of the surrounding country; and it being already late, we determined to camp on the mountains for the night. Sending, therefore, the train forward to find a sheldered camping ground, Mr. Day and I ascended the mountains taking with us the theodolite and barometer. On the northern slope there was a patch of snow, the first we had seen. On reaching the summit, the wind was piercingly cold, and so strong as to make it difficult to take observations. The hight of this peak was, by the aneroid, 318 feet above the pass, or 9,354 feet above the sea. In clear weather the view from this point would be very fine; but there was so much smoke on the lower hills that it was difficult to make out distant objects. Monte Diablo loomed up in the extreme western horizon, while the White Mountains of Utah bounded the eastern. In the south, the Castle Peak of the Sierra could be seen, and to the north, nothing beyond Wasshoo Peak, to the north of Lake Bigler. At last we were fairly frozen out, and had to descend to the camp, which we found in a sheltered spot, near a fine stream, some 600 feet below the summit.

In the evening we obtained some indifferent observations for latitude.

CAMP 4. ALTITUDE, 8,736 FEET.

August 30.—After breakfast we sent the train forward to Clear Lake, which lay in the valley before us some four miles distant, while Mr. Day and I ascended again to the peak, and completed the observations commenced the day before. In ascending the mountain I found a piece of petrified wood in the breccia formation, of which I procured a specimen.

On the summit the wind was blowing as cold as on our previous ascent, though more from the south, and we came to the conclusion that it would not do, provided as we were, to attempt to camp on Round Top, and make that point our astronomical station. The wind would have kept the altitude and azimuth instrument in a continual tremble, which, with the cold at night, would have made our observations worthless. As there appeared to be a flat in Clear Lake Valley, on which we could measure a suitable base line, I determined to set up the instrument there, and connect it with the neighboring peaks by triangulation.

The road down to the valley is very rough; in some places it is almost impassable, and although it never could be made a good one, yet it might be very much improved, and that at no very considerable expense.

CAMP . ASTRONOMICAL STATION 2, ALTITUDE 7,176 FEET.

The descent to the lake from our camp was 1,560 feet. We found our party on the eastern side. They received our announcement of camping in the valley, instead of on the summit of the Sierra, with great satisfaction. Choosing a spot from which I could see Round Top and some of the other well-defined peaks of the summit ridge, all the requisite preparations were made for setting up the instrument.

Clear Lake is about three-fourths of a mile long by half a mile wide; it is situated in the center of a flat as large again, which has been in past times a portion of the lake. Its shore and bottom is composed of pebbles, but without any admixture of sand. A second lake lies to the west, which runs into it. Several large streams feed it on the south-eastern side. It forms the head of one of the largest branches of the South Fork of the American, which being the largest as well as most southern, should bear the name of South Fork in preference to any other. The lake is surrounded by an amphitheater of mountains, composed of the central ridge of the Sierra and the great spur already described. The bases of all these mountains are of granite, while their summits are breccia. Two remarkable masses of the latter rock stand forward on their granite pedestals almost into the valley, and form highly picturesque objects in a spot where all is beautiful. The granite hills are clothed with pine to the base of the breccia; a few juniper give variety to the foliage, while willow and aspen adorn the streams and bottoms.

In the evening we obtained several good observations for latitude, with the sextant and theodolite.

August 31.—We were aroused this morning at an early hour by a thunder storm, which caught us very unprepared. The fly was immediately spread, and our things put under its shelter. By the middle of the day the sun came out again, and the clouds clearing off showed us the summits above white with snow. In a few hours, however, it had mostly disappeared. In the afternoon I set up the altitude and azimuth instrument. I remarked that the aneroid appeared to be little affected by the rain, whilst it appears to be much more depressed by wind.

Sept. 1.—The weather has been beautiful to-day. I adjusted the instrument, and in the evening I obtained a good azimuth of Polaris, and set the instrument on an approximate meridian. I obtained also a set of equal altitudes for time. I fixed up the mountain barometer to-day: at ten o'clock in the morning it read 22·75 in. while the aneroid read 22·63 in. During the day the aneroid appeared more sensible to small changes in the atmosphere than the mercurial barometer. By half-past nine in the evening both instruments stood precisely the same, at 22·71 in. Unfortunately, this was the last observation I had with the mercurial barometer, as it was broken soon after. This was a cause of great regret to me, since I had no means left of checking the aneroid. Still one important comparison had been made, and that too at the highest astronomical station on the journey. Could I have had such another comparison in Carson and Bigler Lake Valley, I should have been perfectly satisfied. The faithfulness of the aneroid so far gave me confidence for the future.

Mr. Day has measured a base line in the valley, and been to the summit of Round Top and some of the other peaks taking observations and setting up flags.

Sept. 2. *Sunday.*—Walked some two miles down the valley. There were a number of currant bushes near the trail, some of which were loaded down with remarkably fine currants, nearly as large as gooseberries and fine flavored. Ferrel brought in some fine duck for dinner, which are in great abundance on the lake.

Sept. 3.—Took equal altitudes for time and completed several of the late observations. In the evening, obtained observations to correct the position of the instrument, and adjusted it on the true meridian. Unfortunately, the telescope received a blow which again threw it out of adjustment and off its center. Of one thing you may be assured, that it is impossible to use the tent devoted to the protection of the instruments for other purposes, without endangering or at any rate delaying the work. Took some fresh observations on north and south stars to re-adjust the instrument.

Sept. 4.—Computed the new observations and again got the instrument on the meridian, and set stakes and flags on each side of the lake on the true meridian.

Mr. Day has been engaged in re-measuring two base lines in the flat of the valley, and in triangulating from the stations to flags that he has had placed on Round Top, Red Mountain, the Elephant, etc. From each of these peaks he has also taken a complete set of observations on all the principal points around, and so covered the country with a complete network of triangles. They have all been taken with the theodolite, and afford ample material for mapping in the country. To-day Mr. Day prolonged my meridian over the Round Top or central ridge of the Sierra, setting up large flags, which we were in hopes would be visible from the shores of Bigler Lake.

Sept. 5.—Rose early this morning to get a transit of the moon, which, however, I did not succeed in. It being now the moon's 23d day, it passes the meridian by daylight, and I shall not be able to get an observation with the culminating stars. Thus the accident of the 3d has lost us a day, at a time when we least could have spared it.

I had seen sufficient to know that the angle of the State boundary must be in Bigler Lake rather than Carson Valley. I therefore gave up the intention of taking the instruments there, and determined after completing the observations at our present camp to proceed to Bigler Lake Valley, and there set up the instrument as near the initial point as might be convenient.

As there would be no available observation for longitude before the 29th, with Mr. Day's advice I determined in the mean time to proceed to Carson Valley, lay in a fresh stock of provisions, and have the flags I required set up on Job's Peak and such other points as might be advisable.

Judge Hyde had left us a few days before for the valley, to be present at the opening of the U. S. District Court. When he left us, I had the intention of following him with the instruments in a few days, but from having obtained the conviction that Carson Valley lay beyond the State boundary line, I had altered my plans as already stated.

Mr. Day proposed remaining here until my return on the 9th, and in the mean time explore the route down the river. Taking with me Merkley, Dustin and Ferrel, with four of our animals, my compass, sextant, the small chronometer by Parkinson and Frodsham, the aneroid and thermometer, we left camp at about half-past two in the afternoon, for Cary's Mill.

Immediately on leaving the valley, our road lay up the ascent to Carson Pass proper. In rising the hill, a very fine view is obtained of Clear Lake Valley, with its two lakes and surrounding mountains. It is certainly the most imposing view on the road, and I believe is unsurpassed in wild beauty or grandeur by any in the State. The juniper grew in considerable numbers on this hill side. This tree is of a highly picturesque form, and is the more remarkable from being so seldom met with. It bears much resemblance to the yew in the contour of its branches and general appearance. On the Sonora and Walker's River Road, on the eastern side of the mountains, it is found in greater numbers, and I made an accurate drawing of it when I first met with it there.

CARSON PASS, ALTITUDE 7,972 FEET.

A large dark granite rock marks the summit of the old Carson Pass. It is of a fine grain, and quite different from that of the hills below, and appears to belong especially to the axis of the Sierra, for I remarked this same description of granite forming the central ridge to the south of the Sonora Pass. I have not seen it elsewhere, except as *nodes* in the white granite formation. The distance from Clear Lake Valley to this summit is about three miles, and altitude above the valley 797 feet; its hight above the level of the sea 7,972 feet.

This appears to be the pass by which Col. Fremont entered California on the 20th of February, 1844, but instead of keeping down to Clear Lake Valley, he continued to ascend the ridge to the head of the Truckee, and thence continued along the Round Top Ridge for several miles, before descending a spur to the South Fork of the American. It is at this point that the Sierra divides, throwing off to the north-east the chain of mountains that forms the western rim of Hope and Carson Valleys. Several of the peaks on this range being considerably higher than those on the True Divide, or Round Top Ridge, Col. Fremont concluded that they formed the axis, or summit ridge of the Sierra. Seeing a large lake to the west of this lofty chain, and an apparent gap in the ridge he was following on the south-west side of the lake, he naturally concluded that this lake ran into the American River. This gap I suspect is the one at the head of the Slippery Ford Creek, or possibly the depression of the ridge in the neighborhood of Johnson's Pass. The lake in Col. Freemont's map attached to his Report, is called Mountain Lake, and in the general map by Charles Preuss, Lake Bomplaud. It has since been named Lake Bigler, and as such is most generally known. An endeavor has lately been made to name it Truckee Lake, from its being on the head waters of that river, but as a lake lying to the north of the Truckee Pass has been known for many years under that name, it would be very unadvisable to disturb the present names.

From the old Carson Pass the road descends a most precipitous hill, certainly the worst and least easy of improvement on the road, in fact the whole ascent we have made for the last three miles, is on this side made in about half a mile; it is a complete falling-off place, and is of itself sufficient reason for the rejection of the Clear Lake route, for the intended Immigrant Wagon Road.

RED LAKE, ALTITUDE 7,247 FEET.

On a small bench of the hill below, and at the foot of Red Mountain, is a small marshy lake, apparently fast drying up. This is Red Lake. I could not see that it had an outlet, but in all probability it soaks through the narrow rim of white granite rocks that lie on the Hope Valley side.

HOPE VALLEY, ALTITUDE 6,535 FEET.

The road continues down the spurs forming the base of Red Mountain, crossing several small streams and little flats, until at length the large meadow flat of Hope Valley is reached, which is about four or five miles long by a mile and a half in width. Much of the rock of these spurs appear to be of an altered, schistose formation, or jasparoid rock. I saw this same rock, in a similar situation on the east flank of the summit ridge, south of the Sonora Pass. It does not appear to belong to the talcose slate, or gold-producing rocks of California, but rather to the quartz or schist, of the burr-stone description, which exists much higher up on the western flanks of the Sierra, and which is extensively developed in the upper portions of Tuolumne County.

The chronometers and aneroid being carried by a person on foot, we could not proceed very fast. I therefore sent Ferrel forward to the Mill to give notice that we were on the road.

HEAD OF CARSON CAÑON, ALTITUDE 6,488 FEET.

It was quite dusk when we arrived at the head of the famed Carson Cañon, and we had not proceeded far before the overhanging cliffs and dark pines above our heads, involved us in total obscurity. The roughness of the road, too, warned us that we had no easy task before us, in getting down this mountain chasm in the dark. Neither of us had traveled over this road before, so we had to trust pretty much to the mules, whose instinct generally keeps them right. We spent three of the longest hours in blundering down this place in the dark, and when at last we did emerge, the light of the stars was even dazzling to the eyes, so totally and painfully obscure had it been. A good supper, however, at Cary's, soon set us to rights again.

CARY'S MILL, ALTITUDE 5,032 FEET.

The difference of altitude between Cary's and Hope Valley, at the top of the cañon was 1,456 feet by the aneroid; our hight above the sea 5,032 feet. Since this period, Mr. Day, in prosecuting the Wagon Road Survey, has measured the difference of level between these two stations, and has made it within *one foot* the same as given above. This remarkable coincidence has increased my confidence in the aneroid, when used with care, but as its zero is very liable to be altered, it ought during a long journey to be checked from time to time with a mercurial barometer. Before retiring for the night, I obtained some good observations for latitude.

September 6.—Sent Ferrel back to Clear Lake camp with the requisite supplies. Took observations for rating the chronometer before starting down the valley.

Cary's Mill is about a mile from the foot of Carson Cañon, and is situated in a hollow formed by the spurs from the mountains on the west, which are well clothed with pine. The lumber produced on the east side of the mountain is very inferior to the sugar pine lumber of California. It is hard, and very full of knots, but no better being obtainable it is in large demand. The Mill is situated on the west fork of Carson River, which rises at the upper end of Hope Valley, and descends through the cañon to Carson Valley.

The east fork of Carson River, which is the largest stream, rises to the south of the valley, and is formed from several large affluents. It heads in the central ridge of the Sierra, near Ebbett's Pass. One of its forks appears to overlap Hope Valley. There is an Indian tribe settled upon it, who since the days of Fremont appear to have been uniformly friendly to the whites. They bear a high reputation for honesty amongst the inhabitants of Carson Valley.

On leaving Cary's, the road makes a considerable ascent over a spur of the mountain, which forms the western side of the valley. On the highest point of this spur, about two miles beyond Cary's, the barometer indicated a rise of 447 feet above the Mill. The whole of this portion of the valley is composed of ridges of pebbles, boulders and sand, overgrown with the wild sage or artemesia, and which slopes down from the base of the moutains to the river. The road winds along over these ridges, which have a most desert-like aspect.

The chain of mountains forming the western side of the Carson Valley, rise from two to four thousand feet above the valley, and although of white granite, and similar in general character, are not only divided into groups of deep ravines, but have certain individual peculiarities which makes them readily distinguishable. The first group, from Cary's to Thornington's, is well timbered with pine,

and has some little grass, or vegetation, over most of its slopes, and appears now of a brown color. The second group, which is the loftiest, is known as Job's Peak; it is divided by deep ravines from its neighbors; it has no vegetation on it, and very few pines; the summit is a perfectly naked cone of decaying white granite, and the whole mountain has a white, bare and sandy appearance. The middle group in this range is of similar character, more cut up, and not so grand in its outlines, but better timbered than Job's. From Daggett's to the Mormon Station, although the summit of the ridge is white granite, the flanks and foot hills on the Carson Valley side are mostly of a metamorphic rock, and have a brown earthy color, and are bare of trees. It is at the foot of a spur of this character that the hot springs are situated. Beyond this the hills have much the same character as the group first described, and are covered with some little vegetation.

From the point of the spur before mentioned, I took bearings to all the southern peaks and sketched the view. A lofty peak, in the neighborhood of Ebbett's Pass, lies some distance to the South. The eastern side of Carson Valley is bounded by several chains of lofty but entirely barren mountains, the very picture of desolation. The length of the upper valley, from Cary's to Clear Creek, is about thirty miles, and in its widest part it is perhaps twelve miles across. On its western side one of the forks of Carson River flows, while the eastern or principal stream comes out from the foot hills on the south-eastern side of the valley, and follows a generally north-western course, to its junction with the West Fork, near the Mormon Station. From thence the river flows to the north-east and passes between the hills to the lower valley, near Gold Cañon. A few cottonwood mark the course of the Eastern Fork across the valley bottom, but the west has very few trees on it except willow. Parallel with the latter are several sloughs, into which most of the streams from the western mountains flow.

The bottom of the valley is very marshy in places. The only part settled upon is the gentle sloping ground between the foot of the western mountains and the river, a large amount of which is fenced in. From Thorington's, houses are scattered along the road all the way down the valley, seldom above a mile apart.

DAGGETT'S, ALTITUDE 4,417 FEET.

We traveled along but slowly. On reaching Dr. Daggett's we received a hearty welcome, and he produced from his garden some very fine musk and water melons, which was a treat to us after our mountain fare.

MORMON STATION, ALTITUDE 4,337 FEET.

We arrived at the Mormon Station by supper time, where we were welcomed by Judge Hyde and Col. Reese.

The U. S. District Court had been opened by Judge Stiles, and the business already got through. The party were preparing for their return to Salt Lake City. My men, who had come out with them in the spring, wished very much to return, but Judge Hyde kept them to their duty.

Since I was here in 1853, a handsome grist mill has been erected, with a saw mill attached, which appears to do a thriving business. A court house has likewise been lately built, and several other improvements made. The small immigration of this season is however complained of by all the inhabitants of the valley.

After supper I obtained observations for latitude, but we had such a large crowd of lookers on, that it was rather difficult to get a good set.

Sept. 7.—A flag has been set on the highest peak above the Mormon Station, and Mr. Mott is to have one placed on the summit of Job's East Peak. I informed Judge Hyde that the principal part of the valley was on the Utah side of the line, although there was a little uncertainty as to the settlements in the upper part of the valley. He accordingly determined to issue the proclamation, calling for the election to take place at the Mormon Station, on the 20th September.

I obtained equal altitudes of the sun for time, but lost the meridian observation. In the afternoon, accompanied by Judge Hyde, we started up the valley on our return. The fall, from Cary's Mill to the Mormon Station, was, by the barometer, 695 feet; the highest of the latter above the sea, 4,337 feet.

JOB'S.

At Job's Store the Judge procured us the supplies required, and parting company, he returned down the valley, while we continued up to Thorington's.

Night had already closed in upon us as we left Job's, and we had hardly proceeded a mile on the road, when the animals frightened at cattle in the sage bushes, took a stampede and scattered one of our packs, containing the provisions, along the road. After an hour's delay, things were righted and we proceeded again, minus our coffee, shot and candles, which had been lost by the accident. The whole of the rest of the journey the animals were stiff-legged and were with difficulty got along at all; and we determined not to make any more night marches.

THORINGTON'S, ALTITUDE 4,729 FEET.

At length we arrived at Mr. Thorington's, or Lucky Bill's as he is generally called. Here we spent the night and found a good supper awaiting us, which was enlivened by the sallies of natural drollery for which our host is famed.

Sept. 8.—This morning I sent back Mr. Merkley to procure more coffee and shot in place of that lost last night. I sent Dartin forward with a flag to a hill in the center of the valley, near which I supposed the State boundary line would fall. I made some sketches and took bearings to most of the principal points around. After dining with Lucky Bill, and thanking him for his hospitality, we resumed our journey.

CARY'S.

On arriving at Cary's Mill, I left the small chronometer (Parkinson & Prodsham's) in his charge, intending to return to the point again—not wishing to subject the chronometer to more moving than I could help; I had confidence that he would not neglect the winding it regularly.

We then continued on about a mile to the first bridge at the mouth of Carson Cañon, which we now had an opportunity to examine by daylight. It is a grand gorge or defile in the mountains, through which the west branch of Carson River falls above 1,200 feet in five miles. It is in some places very narrow, and is closed in on each side by lofty precipices. These mountains, which at some former period appear to have been rent asunder, are of white granite. At nearly the center of the cañon, on the summit of one of the cliffs, to the north, is a large mass of black rock of castellated appearance, no doubt composed of the volcanic breccia so prevalent. This rock is, however, rather remarkably situated, and is the most northern specimen of breccia I have seen on the eastern range. On the summit of the mountains south of the road, are three smooth

knolls of apparently the same rock, but they are not seen from the cañon. They form points of a smooth ridge which overlies the granite. This range of mountains forks off at Job's Peak from the Carson chain, and running in a southerly direction, pass Thorington's and Carson Cañon forms the eastern rim of Hope Valley, toward the southern end of which it sinks down into lateral spurs, and disappears as a ridge altogether.

On reaching Hope Valley, we camped for the night at the deserted log cabin at the head of the cañon. The barometer returned to the same hight here which it had previously marked when we passed this place on our way to Carson Valley a few days earlier.

The appearance of Hope Valley indicates it to have been at one period a mountain lake, its smooth, gravelly bottom, with its beds of pebbles and boulders, and the beach-like formations round the slopes of its hills leave little doubt, on my mind, of its lake origin ; a large portion of the flat even now is marshy, and in the wet season must be covered with water ; indeed, in the map accompanying Fremont's Report, a lake is represented in this place. The pine around the sides of the mountains are of large size ; hemlock and spruce is abundant, and also a handsome species of pine with red bark and wide-spreading foliage.

Sept. 9.—Wishing to obtain the hight of Luther's Pass, in order to transmit it to you with the rest of the hights by Mr. Day, I determined to return to camp by way of this pass and Lake Valley instead of following the Wagon Road to Carson Pass. I was also glad of this opportunity to explore the upper portion of Bigler Lake Valley, which gives rise to the headwaters of the longest branch of the Truckee River. Apprehending that we might find it difficult to get the pack animals across, I sent them forward with Mr. Merkely by the road and took with me Mr. Dustin and the horse I rode, my compass, and the barometer and thermometer.

Luther's Pass lay directly across Hope Valley, to the west, and formed a low gap in the hills. We crossed the marshy flat to the foot of the Pass through which several small, sluggish streams flow ; there is no direct water course or ravine from the pass, although the ground is springy over much of the ascent. We missed the trail and arrived on the summit of the pass at its southern side where it is a few feet lower than where the trail actually crosses. The hight of this pass was, by the barometer, 696 feet above the flat of Hope Valley, while the old Carson Pass at the southern end of Hope Valley is 1,437 feet above the same point. This pass, in fact, is not as high as the bench at the foot of the steep ascent of the old pass, and why a road should not have been constructed over it before seems unaccountable. From the summit of this pass the ground slopes off into a large flat, having a shallow lake in its center, which finds an outlet at the western end of the flat where the hill breaks off and falls to Bigler Lake Valley. Seeing some indications of the trail at the northern side of the valley, we crossed over and found it winding round at the foot of the mountain. The descent from Marlette's Flat to Bigler Lake Valley was far greater than I expected to find it ; we descended some 800 feet and the valley appeared to be about 400 feet lower still, but as the trail continued to wind round the base of the hill to the north-west, we followed it no further. Striking across to the south-west, we passed with some difficulty the rocky creek which comes down from the lake above. The forest was so thick that it was difficult to see far ahead, but what we saw was not very inviting. The country toward Round Top had the roughest possible appearance. The stream of the Truckee, the main feeder of Bigler Lake, came down through apparently impracticable cañons, and I began to fear we had made a mistake in bringing a horse with us. We soon came to another creek which was difficult to cross, this proceeded from a valley to the south of and lying parallel with Luther's Pass ; crossing there a sandy

spur covered with large granite boulders, we came to a very steep, rocky hill which we next ascended, so as to see how to shape our course. From this point we saw that between us and the Round Top ridge there was a basin of naked, white granite rocks cut into deep cañons by the Truckee and its tributaries, and that it would be impossible for us to get across it with an animal. I saw also sufficient to give up all intention of prolonging the meridian line of Clear Lake Camp to Bigler Lake.

We now returned to the south up the ridge we had ascended, alternately climbing and descending, to avoid precipices and fallen pines, which blocked our progress in many places. After proceeding in this way for an hour longer, the country improved. We had got above the immediate brink where the upper valley fell away into Bigler Lake Valley. We crossed some small streams, and at length came on to a spur, covered with the gravel and debris of breccia rocks. Soon after we approached a lofty cliff of breccia, which, with its castellated summit, overhung a most romantic little lake, which we left on our left. The water was dark blue and appeared to be very deep; but we had no time to remain at this enchanting spot. After crossing some more rough granite hills, which bordered the lake on the west, we came out on a low granite sand ridge, in the center of the upper valley. This ridge was characterized by a fair growth of pine along it, while the rest of the valley on each side, as well as the surrounding mountains, were perfectly barren. I need barely say that the latter were of the breccia formation. This small ridge is shown very correctly on Fremont's Map.

As we continued up this flat the mountains gradually narrowed in upon us. Red Mountain, with its lofty rocky summit, frowned above us on the left, while the central ridge of the Sierra, which divided us from Clear Lake Valley, lay to our right. There was some of the finest bunch grass I have seen, on our journey in this upper valley.

The breccia, of which the mountains were composed, cropped out in horizontal lines on both sides of the ridge, and formed vertical steps, to which the snow in many places adhered in large banks, which, in melting, hollowed out the soil from underneath, giving a singular cave and column-like appearance to these ledges, which I had been unable to account for, until I had seen how it was produced.

At length, passing over a small stream which descends from Red Mountain, we began the ascent of the mountain at the forks of the ridges. Half an hour brought us to the summit, where there was a small pool on the very top of the divide, which forms the head waters of the Truckee. The barometer gave, as the hight of this point, 8,250 feet above the level of the sea, being 1,080 feet above Clear Lake, and 2,378 feet above Bigler Lake. The view to the north is confined by the summits of the two ridges, to the valley of the Upper Truckee. I made a sketch and took what bearings I could from this point.

Here we again crossed the trail of Col. Fremont, who kept along on the summit of the ridge, leaving the valley we had ascended, to his right. To our south was the valley of Carson Pass, with the lofty range of breccia mountains beyond. The wind was very cold and we remained but a short time at this point, from which I took bearings to the principal peaks around.

We now descended the precipitous hill-side, to the south, and soon reached the old road, at about a mile to the west of Carson Pass. Proceeding onwards, in the course of an hour we reached our camp on Clear Lake, where we found Merkley had arrived some three hours before with the supplies, to the great relief of the party remaining at camp which had been reduced to living on squirrels and ground rats for the last day or two.

Although I had not pursued the track I had intended, in reaching camp, I had still gained the objects of the excursion. I had procured the approximate elevation of Luther's Pass, and had positively determined that our meridian could not

be prolonged across the rough country which makes the middle portion of the Valley of the Upper Truckee. I had also been to its head, and sketched the general form of the upper portion of this great central valley. I had hastened back to camp to-day for the observations for longitude in the evening, but in getting there I was disappointed. The evening clouded up at the time I wanted it clear, and so they were lost.

Sept. 10.—Mr. Day was to have left us to-day, on his return to Sacramento, I therefore requested him to report to you the progress of the survey. He took a copy of the barometical observations, as we had not the time here to work them out, and we exchanged some of our notes of the survey so far. In the afternoon Mr. Day rode over the Carson Pass to the head of Hope Valley, and made a partial exploration of the pass on the Calaveras route, but the time did not permit of much examination.

Sept. 11.—Been engaged plotting the chief lines of the triangulation, and computing some of the observations. Mr. Day left us this morning. In the evening I got transit observations, and an emersion of the first satellite of Jupiter, which agrees well with the longitude by chronometer.

Sept. 12.—Continued working up the triangulation. Obtained observations for time. In the evening I obtained emersions of the second and third satellites; that of the second was remarkably good. The resultant Lon. is 120° 00′ 09″. The last observation was not so satisfactory. Indeed, frequently, there is a considerable interval between the first ray of light appearing and the satellite obtaining its full brilliancy. It is, therefore, difficult, if not impossible, to obtain the precise instant corresponding to the Greenwich observations. The observations for time have been so numerous, and the results obtained agreeing so nearly with the direct observations for longitude, leaves but little doubt but that the mean of our observations will give a nearly correct result. I desired, however, to obtain some lunar transits as soon as an opportunity offered, which would be about the 20th. In the meantime, therefore, I determined to proceed to Bigler Lake Valley, and set up the instrument at the nearest point I could to the initial point of the State Boundary, and connect the whole survey together by triangulation.

Sept. 13.—Broke up camp, and made our final exit from Clear Lake Valley. The block on which the instrument was placed will mark this station well, and besides which, the bearings on the several peaks around will note the position, should the block be removed or destroyed.

During our stay here the men had built a raft and had crossed the lake several times; it was from six to eight feet deep, and bears evident traces of filling up.

It was 11 A. M. before we were ready to start; we, therefore, determined to proceed only to Hope Valley to-day. We went by the road previously described, over Carson Pass, where the barometer read four-hundredths of an inch lower than last time, caused by an increase of sixteen degrees in the temperature; thus this instrument continues to work well. At the other points along the road, where I had taken the previous observation, it gave nearly similar results to-day.

Ferrel drove the buggy; in going down the bad hill Merkley held on behind, and it was thus got down in safety. We crossed the flat of Hope Valley and camped at the foot of Luther's Pass, at a small spring. Our provisions were again running short, or I would have preferred remaining in this valley a day or two, so as to have ascended Cary's Peak, on the east side of the valley, and completed this portion of the triangulation; as it was, I was obliged to proceed; composed, as my party was, of Volunteers, I had to give up many points in order to keep them at all together.

Sept. 14.—Went over Luther's Pass by the trail to Lake Valley. The road winds round Marlette's Flat at the southern base of the mountain. This is certainly a very fine pass. The descent, however, into Bigler Lake Valley, is difficult;

there are numerous boulders, and the granite ledges are in many places bare; yet a good road can be got. The total descent, from the lower end of the flat to the valley bottom, is 1,186 feet by the barometer. We continued down the fine level bottom of the valley, passing and leaving to our left the trading post, now deserted, where the unsuspecting inmates were murdered in July last. At this cabin the Johnson Road turns up the hill and crosses the ridge. We continued along the flats to Smith's Station, likewise deserted. The house which formerly stood here has been burnt, like almost all the houses on the road. The elevation of this place is 5,958 feet above the sea by the aneroid; we are, therefore 1,218 feet lower here than we were at our camp in Clear Lake Valley. The appearance of the forest too, would also indicate a much lower elevation. From Round Top the ridge falls away very considerably to the Johnson Pass.

The whole of the hills in this neighborhood are composed entirely of white granite, the breccia has quite disappeared. We halted for a couple of hours at Smith's where I took observations and sketched in our route.

We now followed the Johnson Road, and crossing a small stream just past Smith's, we continued along a low ridge of granitic sand and pebbles, slightly elevated above the flats, and lying parallel with the base of the mountain. The whole country is so heavily timbered that we saw nothing of the lake and very little of the mountains; a large stream runs alongside of this ridge for several miles, at the base of the mountains, while the Truckee flows along on the northern side, winding through a large marshy flat which continues down to the lake. At about four miles from Smith's we arrived at the end of this singular ridge and crossed a large creek which falls into the Truckee, the road then winds along over the spurs of the mountains to the east, crossing several smaller creeks, all of which empty into the Truckee. At length we reached the point to leave the road for the lake. We had been obliged thus to wind round the lake to avoid the swampy ground which forms its southern shore.

BIGLER LAKE.

Bigler Lake is a noble sheet of water, from fifteen to twenty miles in length by six to seven in width; we arrived at its shore at dusk, and camped at the point of timber which forms the eastern boundary of the swamps on the southern end of the lake.

Sept. 15.—I went along the beach of the lake to the mouth of the Truckee River; this beech is a strip of firm, solid ground inclosing the swampy flats. I selected a favorable site for our astronomical station, one from which Round Top and several of the other points on that ridge, as well as all the mountains surrounding the lake, could be seen. It was near the mouth of the river and sufficiently far from the timber to prevent its intercepting our view. I had a block cut and prepared for the instrument; in the forenoon I took a set of time observations, but the afternoon closed in cloudy and windy; sent Ferrell and Hancock down to Carson Valley for more provisions.

Sept. 16.—Had a raft made and floated the block half a mile along the lake shore to the place chosen yesterday. The tent was set up and the instrument put into adjustment; took an observation of Polaris at the eastern elongation, and set the instrument on an approximate meridian.

The party sent to Carson Valley for supplies returned to-day, bringing with them very little, and that so bad that it is hardly eatable; the flour is about half smut. They complain that they are entirely out of provisions in the valley.

Sept. 17.—Took observations for time. There are so many clouds on the hills that we cannot make out any of our flags, not even with the large telescope

The lofty peak of Job's Group visible from this camp turned out afterwards not to be the eastern peak on which my flag was erected. I set out and measured a base line of seventy-eight chains on the flat, and had a flag put up on the granite knob some three miles to the south which overlooks this portion of the valley.

Mr. Merkley went to Carson Valley to-day, as he is desirous of returning to California in search of his son, and thus I am all the time short of hands. The afternoon closed in with heavy rain and wind, and the men went off into the forest and built themselves a brush shanty ; I remained at the tent but did not get any observations.

Sept. 18.—The mountains are white with snow, so there will be little chance of seeing any of our distant flags. Spent the morning in computing some of the recent observations. In the afternoon crossed the Truckee on our raft, and went to the point of timber on the western side of the flats, from which I took bearings to our tent and the flag on the granite knob as well as to all the points round the lake. In the evening I took transit observations on an approximate meridian ; obtained also an emersion of the first satellite of Jupiter, which gives as the longitude of the camp, 119° 56′ 30″, while by rate it should be Lon. 119° 58′ 15″.

Sept. 19.—After taking a set of time observations I crossed the Truckee on our raft, and, accompand by Dustin, went to my station on the granite knob, from which I took a complete set of bearings. This knob is an exceedingly rough, white granite hill, or rather mass of rocks, standing in the center of the flats, connected, however, to the main ridge of the Sierra on the west, by a low, smooth and even ridge, that runs out in a north-easterly direction from the mountain, on the south of a low gap in the Sierra, which is certainly the lowest pass in these parts. I have not heard it spoken of under any name and believe it is unexplored ; it leads over to the Slippery Ford branch of the South Fork, and unquestionably would be the pass most suitable for a railroad should the hight of this valley not be insurmountable ; the pass cannot be 500 feet above the flats of Bigler Lake Valley. I would have liked much to have explored it. A fine view of the lake is obtained from this station. The lake is entirely closed in with mountains, and it is impossible to detect the opening by which the Truckee River flows from it. Indeed, no one I have spoken to on the subject has been able to give me any exact information in relation to it, and some even have expresssed a doubt as to whether the lake has an outlet at all! The mountains on the north-western shore gives some indication that there might be a passage that way.

Since my return from the mountains I have understood that there is a road from Yankee Jim's, which crosses the Truckee River on the north-western side of Bigler Lake, and then follows the river up to the lake, round the north end of which it winds, and then crosses over into Washoo Valley. There are others, also, who state that there is an outlet from Bigler Lake to Washoo Valley. If such is the case, certainly a route could be obtained, which would offer an easy grade to the plains. These mountains ought to be properly explored, as from their peculiar character they are cut up by numerous passes, some one of which may serve for the great Pacific Railroad. The lake, I suspect, is very deep in the center, as there is a well defined line of deep blue stretching out from a point on the eastern side, towards the mouth of the Upper Truckee. It would be interesting to ascertain the depth of the lake, lying as it does at an elevation of nearly 1,500 feet above Carson Valley, and separated from it only by a narrow ridge of extremely friable white granite mountains, which are wearing away with considerable rapidity (geologically speaking).

A dense forest spreads out from this point of our observations in every direction, except along the swampy flats before mentioned. The ground in many places is literally covered with strawberry vines, or sun-flowers. The whole bed

of this valley is composed of granitic sand, and banks of pebbles, which in many cases appear sorted by the action of water. We returned to camp late in the afternoon. At the mouth of the Upper Truckee, the stream is about fifty feet wide, with a depth of from two to six feet. It runs very slowly, and in some places has very deep pools. It, as well as the lake, is well stocked with trout. This was not, however, the season, and we did not procure any. There were plenty of wild duck, mud hens and sand-hill cranes. We did not succeed in shooting any of the latter, but the camp was pretty well supplied with duck while our shot lasted.

In the evening I obtained an emersion of the third satellite, which gave our longitude as 119° 58′.

September 20.—To-day being election day in Carson Valley, Dustin and Hancock both went down to vote, and join in the festivities on the occasion of the first election in Carson County. I obtained a set of equal altitudes for time to-day, and from the south end of my base line I took bearings to all the other points visible. In the evening I obtained a transit observation of the moon and zeta and beta sagittarii. It seems that something, however, is always to prevent our getting successful observations. Merkley, in moving round the tent, struck the telescope in the interval between the passage of zeta sagittarii and the moon. The instrument was of course slightly displaced, and the result was, that between the passage of the preceding star and the following star, there was an excess in the observed time, amounting to seven and a half seconds; allowing that this was caused by the blow, and deducting that amount from the observed interval between the transit of the first star and that of the moon's bright limb, the result would give our longitude at 119° 59′ 48″. Very shortly after, the evening clouded up, and I was unable to obtain any observations to replace the instrument on the meridian.

September 21.—Rode to-day to the summit of Daggett's Pass with Merkley; when near the summit we met Dustin and Hancock returning from the valley. The Mormon party have been elected by a large majority. The Mormon Station has been chosen the County Seat, which is to be named Genoa, after the birthplace of Columbus. I set up a flag on the summit of a rocky eminence, a little to the south of the pass. From this point our tent on the lake, the flag on Job's Peak, and the flat of Carson Valley were visible, as well as Pyramid Peak, and several other points already fixed by triangulation. I sent Hancock down to the valley to put up flags in positions I pointed out, determining to make this the connecting point of the triangulations of Bigler Lake and Carson Valleys. After making a sketch, I returned to camp. On our way we followed round the shore of the lake, to its extreme eastern bend, from whence I took bearings to our tent and all the other points.

I was disappointed in the evening in getting a lunar transit. The weather had become very bad, and the sky entirely clouded. Our camp was again out of provisions, and the party much disorganized. When Mr. Day left me in Clear Lake Valley, he had promised to either write to me by the 18th, or to return himself. Up to this time I had received no intelligence whatever of the decision of the Wagon Road Commissioners, and their silence induced me to believe that the work had been abandoned. I had arranged with Mr. Day that I would remain in Bigler Valley until I saw or heard from him, but I now found myself placed in a position that I could remain here no longer. Mr. Ferrel stated that Mr. Day had told him that in case he did not return by the 20th, he was to bring back the buggy to Placerville. Of this I had heard nothing before. He now told me he was determined to return on the following day. Merkley also resolved to accompany him, and being, as I stated, entirely out of provisions, and the rest of

the men unwilling to remain longer in the mountains, I reluctantly consented to remove camp the next day to Carson Valley.

The continued bad weather had prevented my getting the observations I most wanted at this camp; still, considering the means I had at my disposal, the result of the survey had been satisfactory, and its main object attained. The position now of the boundary line between El Dorado County and Carson Valley, was determined within a very small amount of error, and it only remained to carry that line over the mountains, to see exactly where it would fall in the valley.

Previous to doing this, however, the observations had to be re-computed with the corrected results already obtained; and on that being done, a monument should be erected at the point where the boundary line leaves the Lake, and a station fixed in line therewith on the summit of the ridge above Carson Valley. As this, however, could not be done before the office work required in the first instance was completed, I concluded that it would answer all present purposes to connect Carson Valley with the survey, and locate the several settlements there, so that when the map of the entire work was completed, the boundary line could be drawn thereon with accuracy, leaving the tracing it off on the ground to a future occasion.

The latitude and longitude of this camp by a mean of our best observations is, Lat. 38° 57′ 01″; Lon. 119° 58′ 02″, and its altitude above the level of the sea, 5,850 feet. The initial point found by the intersection of the thirty-ninth parallel with the 120th meridian, is, therefore, four miles distant from the camp, on an azimuth of 30° 30′ west of true north. Assuming the longitude given by Captain L. Sitgreaves, U. S. Topographical Engineer, of the point where the Colorado crosses the thirty-fifth parallel, as 114° 40′, the boundary line will form part of a great circle, uniting these two points; and at the thirty-ninth parallel and 120th meridian, the line will make a spherical angle with the meridian of S. 48° 25′ 55″ E., and at the junction of the 114th, 40th meridian and thirty-fifth parallel of N. 45° 13′ 5″ W.

Sept. 22.—This morning broke up camp in Bigler Lake Valley. Ferrel and Merkley returning with the buggy, taking the altitude and azimuth instrument, and such other things as we should not again require, while I left with Dustin for Carson Valley. The station here is marked by the instrument block, and can readily be found by the bearings taken to the different natural objects around.

DAGGETT'S PASS, ALTITUDE 6,824 FEET.

We traveled over the ground of yesterday to the summit of Daggett's Pass, which was 974 feet above our camp on the lake, and 941 feet above the junction of the Wagon Road and trail, at the foot of the pass. Leaving Dustin with the animals on the summit, I ascended to the station chosen yesterday, and took bearings to all the noted points, and sketched in the view to assist me in mapping the work.

The flags I had sent Hancock to set up in the valley were not placed, however, in the positions I had directed, and I was unable to make them out. Leaving a very large flag on this station, I returned to the pass, where Hancock had already arrived, but it was too late to ascend the point again to have the positions of the flags pointed out. A heavy rain storm was hanging over Job's Peak, and a portion of Carson Valley, making objects very indistinct. Descending to the valley, the barometer made the hight of this pass above Daggett's, 2,407 feet; the distance is under four miles; the trail is in some places very precipitous, and winds along the steep sides of the mountain, where a false step would precipitate one into the rocky cañon 500 feet below.

MORMON STATION.

The weather looked very threatening, so I hastened on to the Mormon Station. Judge Hyde was glad to find we had so nearly got through with the work, and did not wish more done than was absolutely requisite. The evening came out very fair, making me regret that I had left our lake station, as I should have got a good observation of the moon had I remained there. I obtained observation for latitude, which gave 39° 00′ 20″. I obtained, also, a lunar observation. Our longitude, by computation, is 119° 49′ 53″, and hight above the level of the sea, 4,337 feet.

Sept. 23.—Sunday brought a day's rest for the men, though not much for me. In the morning I walked down to the bridge over Carson River, just below the forks, with Judge Hyde, and took bearings to locate this point. I had a flag set here. I arranged with the Judge that I would go up the valley the following day, measure the line between my flags in the valley as a base, and complete my survey at the station near Thorington's Ranch, instead of continuing it and closing on Cary's Peak, which I had wished to do; but as the Judge could only promise me the men for three days longer, I had to make the best I could of it. I obtained observations for time, and computed some of those lately taken.

In the evening there was a remarkably beautiful sun-set. A long, narrow streak of clouds, stretching from the northern to the southern horizon, formed, at a considerable hight in the atmosphere, parallel with, and above, the eastern range of the Sierra Nevada. Light, misty clouds, which came up with a westerly wind, stopped on this cloud-bank, which remained stationary for half the night. It retained the brilliant hues of sun-set for a considerable time, and kept its position in the heavens until it had entirely dispersed, or evaporated. It seemed to be the harbinger of fine weather, for from this time the rain-clouds disappeared, and we had another week of summer weather. After it dispersed, the barometer rose about a tenth of an inch.

Sept. 24.—This morning, before starting up the valley, I had some difficulty with the men about their returning with me to Placerville, but on my appealing to Judge Hyde, he settled the matter by saying, that the promises he had made, should be fulfilled, although the survey had taken much more time than he had anticipated.

During the period we had been in Bigler Lake Valley, Mr. Jones, U. S. Deputy Surveyor, was in the upper portion of Carson Valley, engaged in extending the second standard parallel of the U. S. Land Survey across the mountains, partly by measurement and partly by triangulation. I had been in hopes of seeing Mr. Jones before I left the valley, and of being able to connect my work with his.

In going up the valley this morning I met Col. Reese returning from Thorington's, from whom I learned that Mr. Jones and his party had already started on their return to California. He gave me a memorandum which Mr. Jones had left for me, describing the position of the last stake he had set in Carson Valley,

I took bearings to locate the point of the spur near the Hot Springs, and also stopped at Daggett's and other places on the road, for the same purpose. We arrived at Mr. Mott's at noon. I determined to avail myself of his former invitation and remain at his house for the night. In the afternoon I went down to my flag station in the valley bottom, from which I set out and partly measured a base line of two miles, and took a complete set of bearings to the different houses, surrounding mountain peaks and stations. The base line was laid out in range with the western summit of the hill at the head of the valley, where I had had a flag placed, but which, from the smoke in the distance, I could not discern. The bearing of the base line was 28° S. 5′ E. by compass. From this station I saw

the two lofty peaks of Job's Group, seen from our camp on Bigler Lake. Evening closed upon us before I could finish measuring the line; and our animals having wandered off some distance, it was very late before we got back to Mott's.

Sept. 25.—This morning I finished measuring the base; took observations from its southern end, as well as from a point further to the east of it, from which I could see the upper peaks of Job's Group, before spoken of. This base line commences near the forks of the Carson River, in the flat between the two branches, and runs up for two miles to a deep bend the West Fork makes. Large stakes were driven into the ground at the flags. On completing this work we returned to Mr. Mott's.

In the afternoon we went up the valley to Thorington's, accompanied by Mr. Mott, who gave me the names of the owners of the several ranches we passed; all of which appeared to be in flourishing condition. On arriving at Thorington's we found that he had left on a visit to California. Mrs. Thorington, however, made us welcome.

Sept. 26.—Sent Hancock on to Cary's Mill this morning, after the chronometer we had left there when last in the valley. I took Dustin with me to the station flag at the head of the valley. We crossed a deeply furrowed sage plain, which sloped from the mountains from West Fork of Carson River. The whole of this bottom, as previously mentioned, is composed of boulders, gravel and sand. We found the bed of the river very rocky and rather difficult to cross. Immediately on crossing we commenced the ascent of our station hill, leaving our horses at the foot. This hill is unlike all on the opposite side of the river; it is of a volcanic rock, of columnar form. Its sides are exceedingly rough and entirely covered with broken angular fragments of rock, more or less weather-worn. The hill cannot be less than 400 feet above the river. On arriving at its highest point I found that the west summit was somewhat lower than the east, where our flag had been placed, but as the base line had been laid out for the former, I removed the flag to this point, which intersected with our line, and at 28 N. 5 W. From this station I made a sketch of the surrounding mountains and of the valley generally, and took bearings to all noted points. This hill is very near to the State boundary line. It stands isolated, although apparently belonging to a range of low hills which stretch out from the direction of Cary's Peak, along the east side of this fork of the river. Their general form is rounded and water-worn, but they are all of volcanic rock. I was unable, however, to ascertain whether this rock was an overlying one, or a dyke in the bed rock of the valley.

On returning to Thorington's I found Judge Hyde and Mr. Mott, who were anxious to know the position of the State boundary. Of course, before the observations were computed and the work completed, I could only give a general opinion. I stated that I suspected the line would cross the valley in the immediate neighborhood of Mr. Thorington's house; that I believed the house was on the Utah side of the line, but I would not be quite certain.

Hancock had returned from Cary's Mill with the chronometer, which had been regularly attended to while there. I wanted, as stated before, to have ascended Cary's Peak, and taken observations to the points of the Clear Lake triangulation, but under the circumstances this had to be given up. In the afternoon, having nothing to detain us here, we bid adieu to Mrs. Thorington, and returned down the valley.

Many were the inquiries made of us as we proceeded, as to where the boundary fell, and I was glad to perceive that the result appeared to give general satisfaction. Indeed, falling as this line does, diagonally across the mountains, thence down a spur, and crossing at the bend of the valley, it does not cut up or divide any of the valuable property. From all I have been able to learn, the general opinion seems to be that the ranches would sell at higher prices in Utah, than if

they had been in such an isolated portion of California. The ranch of Mr. Thorington's is one of the finest in the valley; he has about 600 acres of land fenced, most of which is under cultivation; a large stable, a dwelling house, and several small buildings. Old's and Williams' ranches follow. Mr. Wm. Cary has a small ranch, which has been lately fenced. At Job's, where the principal store in the valley is located, there are several houses, some of which display taste and neatness. The farming establishment of Mr. Mott and his sons, surpasses all the rest, not only in size, and the amount of land under cultivation, but in its valuable improvements, and in the large amount of stock. The dwelling-house, which is the best in the valley, is a comfortable log farm house, in which all the substantial comforts of life are to be found, and where Mr. Mott and his wife, surrounded with their sons, daughters and grand-children, lead a truly patriarchal life.

On arriving at this ranch I accepted Mr. Mott's invitation to remain with him until I left the valley; and it being arranged that we should start on our return journey on the 28th, Dustin and Hancock continued on to the Mormon Station with the Judge, to make the necessary preparations.

Sept. 27.—Engaged the whole day in plotting out the main lines of the Carson Valley triangulation. In the evening I obtained a good observation of Polaris, which makes our Lat. 38° 56′ 46″.

Sept. 28.—At an early hour this morning Dustin and Hancock had everything prepared, and we took leave of our hospitable hosts. Judge Hyde met us at Dr. Daggett's, and wishing us a pleasant journey, we started on our return.

On reaching the summit of Daggett's Pass, the aneroid read nearly the same figure as before, allowing for the change between a windy, cloudy day, and a bright one.

We descended to the Wagon Road, along which we continued to Smith's Station. As this road has been already fully described, I shall not dwell upon it now. We came to the foot of Johnson's Pass at a little before 5 P. M., and in half an hour were at the summit of the divide; the barometer making the hight of the pass from its foot, 782 feet. I estimated that from the place where I took the lower reading to the valley bottom, might be fifty feet, but it is possible that it may be more.

JOHNSON'S PASS, ALTITUDE 6,752 FEET.

The hight of this pass above the level of the sea, is 6,752 feet. It is, therefore, 425 feet below Clear Lake Valley, on the old road. Incredible as this result is, I have no reason to doubt it, the barometer having been tested at Clear Lake Valley, and since that time it has apparently worked correctly. The luxuriance of the forest in Bigler Lake Valley is an evidence that its altitude cannot be as great as has been usually imagined. The timber in the valley belongs to an altitude of not above 5,500 feet on the California side. It is probable that the climate is ameliorated by the large expanse of water in Bigler Lake, which is never frozen in the winter. The Johnson Pass is the lowest of any of the central passes yet examined, and as such, most fitted for a winter road. The pass before alluded to, lying some three or four miles north of this, although apparently of less elevation, does not appear to offer as great facilities for a Wagon Road; it does not enter the Bigler Lake Valley at as convenient a point. At about a mile to the south of the Johnson Pass there is another depression in the ridge, over which Mr. Henderson, County Surveyor of El Dorado, proposed locating the road. It has since been adopted by Mr. Day for the new Immigrant Wagon Road, and is, I understand, somewhat lower than the Johnson. After having attained the summit of the divide the present road rises a little on the ridge before it descends into the valley of the South Fork of the American. About a mile below the pass

we camped for the night on a flat which at some seasons I suspect is overflowed. The barometer made us 279 feet from the pass, and an altitude of 6,473 feet above the sea.

Sept. 29.—Our animals not being tied up last night, wandered off, causing us to lose more than half the day in searching for them. In the afternoon they were brought in by an immigrant party, who had found them on the road half way back to the Mormon Station, who, believing they belonged to a party ahead, had brought them on. We did not resume our journey until 3 P. M. On leaving this camp the country falls away abruptly; several small streams come in from the south. Four miles' travel over a rapidly descending country brought us to the brink of the hill above Slippery Ford Creek, which is one of the worst parts of this road. This hill is mostly composed of ledges of naked granite, which crop out in the form of large, sloping steps, which in many places are broken off into immense boulders. The hill is covered by a growth of chaparral on the sandy places. The Slippery Ford Creek is the most northern branch of the South Fork, and drains the mountains from Pyramid Peak to the main summit, which form a grand amphitheater around its head waters. There is no spot on the road more strikingly wild. It is a naked basin of white granite rocks. On the south side of the river is a lofty cliff of dark granite, which contrasts finely in color and abruptness of form with the neighboring mountains.

SLIPPERY FORD, ALTITUDE 5,358 FEET.

At Slippery Ford Cabin the barometer made our altitude 5,358 feet, and the descent from the boulder hill 492 feet. We continued down the South Fork about a mile, to where we found some grass, and camped for the night; altitude by barometer, 5,136 feet.

September 30.—Made an early start; kept to the Wagon Road, which continues to wind up and down over several of the spurs of the mountains on the north side of the river for five miles below Slippery Ford. The barometer at this point marked 4,901 feet.

The road here winds up to the summit of the ridge, near to which is the small flat of Silver Creek Ranch; we had ascended 1,376 feet in the last two miles. The summit of the divide is about 100 feet higher than the ranch. Its level above the sea is 6,277 feet, being more than 300 feet above Bigler Lake Valley. This elevation accounts for the large amount of snow on this ridge in winter. It is formed by a spur from Pyramid Peak; on the north is the valley of Silver Creek, in which there are some large flats, and where much stock is ranched during the summer. The road now continues along the ridge, to Peavine Hill, from which a very extensive view is obtained; the elevation of this hill is 6,410 feet above the sea. From this point the ridge branches out, and falls away considerably. The road descends precipitously for above 800 feet, to the point where the trail from the river meets it. From here it continues along a gradually descending ridge, passing Brockliss' trading post. This is one of the finest portions of the road, yet the descent from the foot of Peavine Hill to the point of the ridge, a distance of about ten miles, is 1,554 feet.

BARTLETT'S BRIDGE, ALTITUDE 2,532 FEET.

The road now descends from the ridge to the river at Bartlett's Bridge, which is now kept by Mr. Rodgers. The distance from the summit is called three miles, the descent 1,510 feet; we had reduced our altitude here to 2,532 feet above the level of the sea.

On my arrival I was informed that Mr. Day was expected the next day, and that the South Fork route had been adopted by the Commissioners, and that the survey was to be immediately commenced. We remained here for the night. Mr. Rodgers had spent a fortnight in Bigler Lake Valley, in the early part of the summer, and gave me some information respecting parts of the valley I had not visited, but he knew nothing of the north portion of the lake, or where the Truckee flowed from it. He informed me that he had seen no indication whatever of the lake having an outlet.

October 1.—Made an early start by ascending the hills to the junction of the old Carson and the Johnson roads. The hight given by the barometer was 1,410 feet rise. This spot, as was before stated, is 3,942 feet above the level of the sea. The barometer did not return quite to the same hight shown here formerly; still, the difference was such as is within that of the atmospheric changes. As I have previously stated, the aneroid seems more sensitive to these changes than the mercurial barometer. It is possible, however, that the zero may have been slightly altered in this return journey, for I had carried it slung over my shoulder riding, while in the outward journey it had been carried principally by hand, and never on horseback.

PLACERVILLE.

We proceeded along our former traveled road, passing the Sportsman's Hall and Hawley's, and arriving at Placerville by noon, where I had the pleasure of meeting Mr. Day and yourself, and reporting personally the results of the survey, which a few days afterwards, at your request I embodied in a communication dated October 5, 1855.

In comparing the merits of the several routes proposed for the Immigrant Wagon Road, I will observe that the old Carson Road may be characterized as a ridge road. It keeps for the most part on the summits of the divides, and makes few descents, until it reaches its culminating point. For the greater portion of its length, it is a good natural road, of easy grades, and although it is eighteen miles longer than the Johnson, it has generally been preferred by immigrants, as being better provided with grass and water. The very difficult and precipitous portions of the road have been already pointed out. The route examined by Dr. Bradley would be free from many of the objections that could be urged against the old road, yet its general elevation would be greater, and its distance longer than that of the adopted road. The Johnson Road, as at present traveled, has several extremely precipitous hills. The ascent to the ridge on the north side of the South Fork of the American, is very objectionable, not only from the unnecessary hills it traverses, but also from its great elevation. The road as adopted by the Commissioners, follows the valley of the South Fork, up to Slippery Ford, on its southern exposed slopes, and changes an altitude of from 4,000 to 6,500 feet, for one from 2,500 to 4,500 feet. The culminating point of this road, at Luther's Pass, is 1,800 feet below that of the old Carson Pass, while Johnson's Pass is 400 feet lower still. The old Carson Road has thirty-two miles, at an elevation of from 7,000 to 9,000 feet above the level of the sea, while the adopted road has only three miles; the latter, at its highest point, does not exceed 7,200 feet, while the former 9,036 feet. From the profile it will be seen that the adopted road throughout its entire distance, is at least 1,500 feet below the old Carson Road, and from 500 to 1,000 feet below the Bradley Cut-off. For the more readily comparing the hights on the four roads, I have prepared the following table, showing the number of miles at corresponding elevations on each of the roads, from their junction fifteen miles above Placerville, to Cary's Mill in Carson Valley; the time

that snow remains on the ground is of course only to be considered as approximate.

Snow remains on the ground.	Hight above the Sea Level.	Road Adopted.	Johnson's Road.	Old Carson Road.	Bradley's Cut-Off.
	feet. feet.	miles.	miles.	miles.	miles.
	2,000 to 3,000	6	2		
During year, 1 month.....	3,000 " 4,000	13	4	6	6
" 2 months.....	4,000 " 5,000	10	7	7	8
" 3 "	5,000 " 6,000	9	14	10	16
" 4 "	6,000 " 7,000	11	22	13	22
" 6 "	7,000 " 8,000	3	3	24	9
" 8 "	8,000 " 9,000			8	
" 8 to 9 months....	Above 9,000			1	

The above table shows conclusively that the greater portion of the journey by the adopted road, will be traveled at a comparatively low elevation. It must be borne in mind that the average duration and depth of snow on the ground, on the two latter roads is far more; not alone from their greater elevation, but from the vicinity of the very lofty peaks that surrounds the old Carson Passes. The Bradley route being also on the northern slope of the ridge, will, during a considerable portion of the year, be little benefited by the sun's direct rays, and cannot, therefore, be considered as a favorable locality for a winter road.

The following tables form portions of this report, in which the several results of the survey will be found in their appropriate place.

Table 1. Table of Geographical Positions, Latitudes and Longitudes.
" 2. Table of Distances and Altitudes on the old Carson and Johnson Roads, with notes thereon.
" 3. Table of Comparative Hights on above routes, arranged in the order of their altitudes.
" 4. Table of Approximate Distances and Altitudes on the Walker's River and Sonora Immigrant Road, from observations made in 1853.
" 5. Table of the Meteorological Observations made during the journey.
" 6. Barometrical Register for the months of August and September, 1855, kept at Sacramento, furnished by Dr. Logan.
" 7. Barometrical Register for the month of August, kept at Coloma, by Dr. W. Zelnar.
" 8 Triangulation Tables.
" 9 List of Flowers.
" 10 Astronomical Observations, with introductory notes thereon.

Accompanying this Report I beg leave to hand you the following maps and sections:

1st. A Topographical Map of the country embraced in the survey, showing the boundary line between the State of California and the Territory of Utah, from the intersection of the 120th meridian and 39th parallel, as far as surveyed, on a scale of two miles to the inch.

2d. Map of the Lines of the Triangulation.

3d. Section, showing the Profiles of the old Carson and Johnson Roads, drawn on a horizontal scale of four miles, and a vertical one of 600 feet to the inch, having also profiles of the same drawn underneath, to equal scales of four miles to the inch.

All of which is respectfully submitted,

By your most obedient servant,

GEORGE H. GODDARD.

TABLE OF GEOGRAPHICAL POSITIONS—Latitudes.

PLACE.	Date of Observa'n.	Latitude. Results.	Latitude. Adopted.	REMARKS.
		° ′ ″	° ′ ″	
Monte Diablo, Meridian		37 53 04·5	37 53 04·5	Determined by U. S. C. S.
Sacramento, Sur. Gen'ls Office.		38 34 41·5	38 34 41·5	By connect'n with U. S. L. S.
Placerville, Astro. Station 1		38 43 32·3	38 43 32·3	Final results not fully com'd.
Hawley's	Aug. 26.	38 44 40	38 44 40	Approximate.
Camp Springs	" 27.	38 42 23	38 42 23	"
Tragedy Springs	" 28.	38 39 34	38 39 34	"
Carson Camp	" 29.	38 38 20	38 38 20	"
Clear Lake, Astro. Station 2	" 30.	38 42 09·8		Mean of 14 Observations.
" "	Sept. 2.	38 41 46·5		Transits 12 stars.
" "	" 3.	38 42 15·1		Mean of 10 Transit Observa.
" "	" 4.	38 42 13·3		" 6 "
" "	" 9.	38 42 49·2		" 9 "
" "	" 11.	38 42 17·7		" 7 "
			38 42 23·8	" 65 Observations.
Cary's Mill, Carson Valley	" 5.		38 47 02·5	Approximate.
Genoa, Mormon Station	" 6.			
" "	" 22.	39 00 02	39 00 02	"
Bigler Lake, Astro. Station 3	" 16.	38 57 06·1		Mean of Transit Observation.
" "	" 18.	38 57 13·2		" "
" "	" 20.	38 57 01·1		Mean of 10 Transit Obser's.
" "	" 21.	38 56 20·6		" Sextant "
			38 57 01·1	Mean of — Observations.
Mott's Ranch, Carson Valley	" 27.	38 56 45·8	38 56 45·8	Approximate.
Pyramid Peak			38 51 15	By Triangulation.
Round Top			38 44 48	" "
Cary's Peak			38 44 50	
Job's East Peak			38 52 05	
Highest Peak of Group			38 52 22	
Old Carson Pass			38 42 15	
Highest Summit			38 39 30	West Pass.
Johnson's Pass			38 50 20	
Luther's Pass			38 48 18	
Daggett's Pass			38 59 15	
Smith's Station			38 52 33	Bigler Lake Valley.
Slippery Ford				On S. Fork, Am. River.
Bartlett's Bridge			38 47 40	Over " "

TABLE OF GEOGRAPHICAL POSITIONS—Longitudes.

PLACE.	Date of Observa'n.	Longitude. Results.	Longitude. Adopted.	REMARKS.
		° ′ ″	° ′ ″	
Monte Diablo			121 54 01·2	Determined by U. S. C. S.
Sacramento			121 27 43·7	By connect'n with U. S. L. S.
Placerville, Astro. Station 1	Aug. 17.	120 47 01·5		First Satellite Jupiter.
" "	" 19.	120 45 01		" "
" "	" 23.	120 46 43		By Telegraph, from S. Fran.
			120 46 22·9	By U. S. L. S., corrected.
Hawley's			120 38 29	By connection, approximate.
Camp Springs			120 19 18	" "
Tragedy Springs			120 06 25	" "
Carson Camp			120 00 00	" "
Clear Lake, Astro. Station 2.	Sept. 11.	120 00 25·5		By rate, chronometer.
" "	" "	120 00 37		First Satellite Jupiter.
" "	" 12.	120 00 08·7		Second " best.
" "	" "	119 58 27		Third "
" "	" "	120 00 06·4		By rate.
			120 00 08·7	By best Observations.
Bigler Lake, Astro. Station 3	" 18.	119 58 15		By rate.
" "	" "	119 56 30		First Satellite Jupiter.
" "	" 19.	119 58 00		Third "
" "	" 20.	119 59 48		Lunar Transit, imperfect.
			119 58 08·2	By mean of Observations.
Cary's Mill			119 47 22	
Genoa			119 48 25	Mormon Station.
Mott's Ranch			119 48 05	
Pyramid Peak			120 07 24	
Round Top			120 00 40	
Cary's Peak			119 50 06	
Job's East Peak			119 49 35	
Highest Peak, Job's Group			119 50 50	
Old Carson Pass			119 56 48	
Highest Summit, Old Road			120 00 00	West Pass.
Johnson's Pass			119 59 16	
Luther's Pass			119 55 00	
Daggett's Pass			119 50 40	
Smith's Station			119 58 14	Bigler Lake Valley.
Slippery Ford				On S. Fork, Am. River.
Bartlett's Bridge			120 30	Over " "

DETERMINATION OF ALTITUDES,

And Notes on the Barometrical Observations taken on the Old Carson and Johnson Immigrant Roads over the Sierra Nevada, 1855.

The altitudes given in the following tables have been calculated from a series of observations made with the aneroid barometer during the journey. These observations are given at full.

The aneroid barometer used was No. 264, J. W. Queen, Chestnut Street, Philadelphia. It will be seen by a comparison with the register of Dr. Logan, of Sacramento which follows, that the aneroid was two-tenths of an inch lower than the Doctor's barometer on the first of August. There is reason to believe that the latter even was too low, but in the absence of a standard barometer, it is impossible to tell what the true hight of the mercury should be in this country at the sea level. Certain it is, that the barometers in general use here, mostly of English construction (ship barometers), stand *very low;* while those which have been prepared with care and set up in San Francisco, on the contrary, appear to stand *too high*. It is possible that the quicksilver may be impure in the latter, and its specific gravity in consequence, too little. We await with impatience the arrival of a standard barometer, which is now on its way to this country, sent by the Smithsonian Institute to the San Francisco Academy of Natural Sciences.

In reducing the observations into altitude, I have considered it more advisable to depend rather upon the results obtained by successive differences, from station to station, taken within a few hours of each other under nearly similar atmospheric circumstances, than upon those obtained by any other mode. Thus, instead of taking the mean of all the observations at any camp as the reading at the upper station, and the present uncertain base of our sea level as the lower reading, I have, in all cases, preferred taking the difference between the last observation on leaving camp and the first observation made on the road, and so on, the difference between each observation and its last preceding one, until our arrival at the evening camp where the first observation made is the one used. The successive differences thus obtained, being put together, give the hights furnished in the table. Although this method carries an error once committed throughout the entire series, still I conceive it gives a nearer approximation to truth than a mean derived from the few observations made at any camp and compared with what I may consider as an altogether imaginary base could possibly give.

In addition to the aneroid barometer, I was furnished with one of Green's iron cistern mountain barometers, but from the difficulties attendant upon setting up this instrument, it could only be used at the principal camps by way of a test on the aneroid. Unfortunately, I did not receive it in time to set it up in Sacramento so as to compare it with the aneroid before leaving on our journey. This comparison was, however, made at Placerville and at the astronomical station in Clear Lake Valley, the highest permanent camp on the journey, and in both cases the two instruments coincided, as will be seen by the Register. At this camp the mountain barometer was unfortunately broken, and so no further comparisons could be instituted. The fluctuations of the aneroid are more considerable than those of the mercurial barometer, particularly those caused by the non-periodic variation of atmospheric pressure.

The corrections for horary variation and extreme air temperatures, given in the very valuable Barometrical Reports of L. Blodget, Esq., of the Smithsonian Institute, and Dr. George Engelmann, of St. Louis, and used in the reduction of the observations made on the explorations of Lieutenants Whipple and Beckwith, and which appear to be required for the California climate, however applicable they may be to the mercurial barometer, do not appear to answer for the aneroid.

There is, indeed, an uncertainty as to the amount of correction the aneroid requires for differences of temperature, and indeed as to what formula is most applicable to the reduction of observations made with this instrument. After trying several, I found the well-known formula of Bailey, Formula 38, Astronomical Tables, to give the best results, and have therefore used it in all cases.

There is another source of uncertainty with the aneroid; it appears highly sensitive to wind, and the amount of correction required can only be considered as approximately known. Hourly observations should be taken with the instrument at the principal points of a survey to get data for future use; my time, however, was too much occupied with the other duties of the survey to allow me to give that attention I would have wished to this subject. Yet, notwithstanding all these uncertainties and sources of error, I have had several most surprising instances of the correct working of the aneroid used. It is with considerable satisfaction and pleasure that I give the following comparisons, with actual measurements since made by the Hon. Sherman Day over the same ground in the survey of the Immigrant Wagon Road.

In my preliminary report, dated October 5th, and published on the following day, I gave the approximate hights of Cary's Mill in Carson Valley, and the head of Carson Cañon in Hope Valley. The difference of elevation between these two points was 1,456·2 feet. Mr. Day, on his return in the last week in December, gave me his measurements with theodolite and chain, up Carson Cañon between the same points, which amounts to 1,455·4 feet, thus proving the wonderful and absolute accuracy of the instrument in this observation.

In the hight of Luther's Pass, above the same point in Hope Valley, the difference will be seen to be 695·5 feet by my observations; Mr. Day's measurement makes it 715·6 feet. There is an apparent error here of twenty feet, but the hight given by me was at the lowest point of the divide, while the road crosses a small ridge slightly elevated above the former, which makes the observations almost, if not quite, identical. In the hight of the Slippery Ford Hill we correspond again exactly. In some points, however, there are discrepancies. Mr. Day makes the descent from Marlette's Flat to Bigler Lake Valley forty feet greater than I do. In the hight also of the Johnson Pass, Mr. Day's hight will, I expect, exceed mine by about 100 feet; there is, however, a little uncertainty as our points of observation were not the same. I took the lowest point of the road on the summit of the divide, as the top of the pass, while the old road winds along on the divide for a quarter of a mile at an increased elevation.

I may also mention that, in the same preliminary report the difference between the elevation of the Mormon Station and of Cary's Mill, is within five feet of that made by reckoning it from the successive differences along the road.

So many instances of accuracy, absolute and approximate, gives me great reliance in the aneroid barometer, when used with care; but at the same time it is an instrument so liable to change its zero, from a jar or blow, that it ought to be carried in a basket by hand, by a person on foot, and not strapped across the shoulder or carried by a horseman. There being no means of detecting the amount of error caused by a change of zero, it is impossible to be too careful in its use. It is an instrument so adapted to an exploration of this nature, from the ease and rapidity with which the observations can be made, that it is certainly deserving of that care and attention that shall insure accuracy in its results.

A means of testing it at all the principal camps should likewise be provided, so as to obtain data for its temperature and horary correctness, as well as to be able to reset it, should its zero have been altered. The mercurial barometer should be used for this purpose, as the errors to which the measurement of hights by the boiling point is subject, are so very serious, that little dependence can be placed on results so obtained.

On my return to Placerville I handed over this aneroid to Mr. Day, who has had it with him ever since, testing it on several occasions. It has, however, had its zero altered by rough usage, several times; still, Mr. Day states, that the difference between certain points on the road were very similar to those previously given by me.

For more readily forming a conception of the relative level of the country, I have arranged a table of the altitudes of all the principal points on the old Carson and the Johnson Roads, in the order of their elevations.

I have also inserted among these tables one, of the hights along the Sonora and Walker's River Immigrant Road, made from a series of observations, taken with an aneroid barometer, by me, when acting as Civil Engineer to the Railroad Expedition under Lieut. Moore, U. S. A., in 1853. The observations given were tested by the boiling point, at all the camps, which invariably gave a yet greater elevation. I am under the impression, however, that the hights given in the table are too great, for at all the points on the eastern slope of the mountains, high winds have lowered the instrument on several occasions. The mode of reduction I then employed was that of the *means* of the observations, against the monthly mean of Dr. Gibbon's barometer at San Francisco, as a base. As previously stated, this method of reduction I have since abandoned for that of successive differences, which, if applied to hights on the road in question, would lower them from 100 up, perhaps, to 400 or 500 feet, in the more eastern portions of the journey.

GEORGE H. GODDARD.

TABLE OF APPROXIMATE DISTANCES AND ALTITUDES

On the Carson and Johnson Roads, as deduced from Observations with the Aneroid Barometer, taken by G. H. Goddard in connection with the Wagon Road Survey over the Sierra Nevada, August and September, 1855.

SACRAMENTO TO JUNCTION OF CARSON AND JOHNSON ROADS.

PLACES.	Approx. Distance.		Approx. Altitude.		REMARKS.
	Last Station.	Sacrame'o.	Last Station.	Sea Level.	
	miles.	miles.	feet.	feet.	
Sacramento				57·0	S. Gen.'s Office, 4th St. 2d story.
"				39·0	Levee, according to Dr. Trask.
Wellington Hotel...	22·0	22·0	408·1	465·1	Oaks scattering.
Summit Hill	1·0	23·0	447·5	912·6	
Pines on Ridge.....	1·0	24·0	91·1	1,003·7	Pines first appear among the oaks
Divide			81·2	1,084·9	At head of fork of Cosumnes.
El Dorado House...			248·4	1,333·3	Pitch pines.
Mud Springs.....		41·5	183·7	1,517·0	
Diamond Springs ...	1·5	43·0	196·5	1,713·5	
Placerville.....	2·0	45·0	41·6	1,755·1	At Cary's Hotel, ground floor.
"				1,770·5	By mean of 57 Observations.
On Hill				1,855·5	At Astronomical Station.
Elk Horn House....	8·0	53·0	919·4	2,674·5	Hawley's Trading Post, forest.
Sportsman's Hall ...	3·5	56·5	571·9	3,246·4	Steam Saw Mill.
Mountain Cottage...	2·0	58·5	232·5	3.478·9	Sugar pines, cedars and firs.
Junction House	2·0	60·5	464·0	3,942·0	At f'ks of Car. and Johnson roads.

TABLE OF APPROXIMATE DISTANCES AND ALTITUDES—Continued.

OLD CARSON ROAD.

PLACE.	Approx. Distances.		Approx. Altitude.		REMARKS.
	Last Station.	Sacrame'o.	Last Station.	Sea Level.	
	miles.	miles.	feet.	feet.	
Junction House		60·5		3,942·9	At F'ks of Car. and Johnson roads.
Forks' Road	2·0	62·5	205·5	3,737·4	Road to Diamond Springs.
Cold Spring Ranch..	9·5	72·0	780·1	4,517·5	Taylor's, at foot of Iron Hill.
Camp Springs.....	4·5	76·5	980·4	5,497·9	At Camp No. 2, south side ridge.
Summit of Divide...	1·0	77·5	351·3	5,849·2	Road reascends ridge.
Head of Camp Creek.	5·0	82·5	946·6	6,795·8	Good road along divide.
Summit, Alder Hill..	1·0	83·5	457·5	7,253·3	Rough Granite Hill.
Leak Springs.....	1·0	84·5	224·9	7,028·4	Road descends to South.
Gulch to Am. River.	1·0	85·5	20·0	7,008·4	" passes over ridge to N. slope.
Summit of Ridge ...	1·0	86·5	119·7	7,128·1	" reascends ridge.
Burnt Store.....	1·0	87·5	205·0	6,923·1	On low divide.
Volcano Road.....	1·0	88·5	338·5	7,261·6	Forks of Road.
Granite Hill.	1·0	89·5	126·8	7,388·4	On divide.
Tragedy Springs....	2.5	92·0	124·3	7,512·7	At Camp No. 3.
Summit Hill	1.5	93·5	273·3	7,786·0	Granite Hill.
Valley	1·0	94·5	325·1	7,460·9	Tributary of Mokelumne.
Summit, Breccia Pass.	1·5	96·0	329·7	7,790·6	Cross from granite, the Breccia
Green Flat.....	2·0	98·0	54·0	7,736·6	R'ge, to tributary of Moklm'ne.
Summit Divide	1·5	99·5	461·4	8.198·0	Reascends ridge to Shanty.
High Point	4·0	103·5	461·7	8,659·7	Granite ridge.
Carson Spur Pass..	1·5	105·0	376·4	9,036·1	West summit, (highest pn't road.)
Camp No. 4.....	0·5	105·5	299·8	8,736·3	On North slope of mountain.
Clear Lake.....	4·5	110·0	1,560·4	7,175·9	Astronomical Station No. 2.
Carson Pass.....	3·0	113·0	797·0	7,972·9	True divide of Sierra.
Red Lake.....	1·0	114·0	725·0	7,247·9	Small lake at foot Red Mountain.
Hope Valley.....	3·5	117·5	712·4	6,535·5	At foot of spur in valley bottom.
Head Carson Cañon.	3·0	120·5	46·8	6,488·7	At Log Cabin.
Cary's Mill.....	5·5	126·0	1,456·2	5,032·5	Carson Valley.
Spur of Hill.....	2·0	128·0	447·2	5,479·7	" "
Thorington's	4.0	132·0	750·0	4,729·7	" "
Job's	6·0	138·0			" "
Mott's	8·0	140·0	284·0	4,445,7	" "
Daggett's.....	3·0	143·0	28·2	4.417.5	" "
Genoa	3·0	146·0	80·5	4,337,0	" "

TABLE OF APPROXIMATE DISTANCES AND ALTITUDES—CONTINUED.

JOHNSON'S CUT-OFF ROAD.

PLACE.	Approx. Distances.		Approx. Altitude.		REMARKS.
	Last Station.	Sacrame'o.	Last Station.	Sea Level.	
	miles.	miles.	feet.	feet.	
Sacramento				57·0	See last table.
Junction House	60·5	60·5		3,942·9	At forks of road.
South Fork Bridge	2·5	63·0	1,410·3	2,532·6	Rodger's, late Bartlett's.
Summit, North Hill	3·0	66·0	1,510·6	4,043·2	Ridge Road.
Brockliss' Post	8·0	74·0	1,210·9	5,254·1	
Peavine Ranch	1·5	75·5	344·9	5,599·0	Foot of hill.
Peavine Hill	0·5	76·0	811·8	6,410·8	Very steep hill.
Burnt Store	4·0	80·0	138·5	6,549·3	
Silver Creek Ranch	3·0	83·0	272·1	6,277·2	Road descends to river.
Valley of S. Fork	2·0	85·0	1,376·1	4,901·1	Point, wagon road turns up hill.
Camp on " ...	4·0	89·0	235·5	5,136·6	Above Strawberry Flat, ¼ mile.
Slippery Ford	1·0	90·0	222·1	5,358·7	At Log Cabin.
Boulder Hill	1·0	91·0	492·4	5,851·1	First hill beyond Slippery For
Upper "			182·1	6,033·2	Hill beyond flat.
Camp on flat	4·0	95·0	440·0	6,473·2	Upper flat.
Johnson's Pass	1·0	96·0	279·3	6,752·5	Summit of true divide.
Lake Valley	1·0	97·0	782·4	5,961·0	About fifty feet above river.
Marlette's Flat	2·0	99·0	1,186·0	7,147·0	Lower end flat.
Luther's Pass	2·0	101·0	38·0	7,185·0	Summit of divide.
Hope Valley	2·0	103·0	696·3	6,488·7	At Log Cabin.
Cary's Mill	5·5	108·5	1,456·2	5,032·5	Carson Valley.
Genoa	20·0	128·5	695·5	4,337·0	Late Mormon Station.

BY DAGGETT'S TRAIL.

Lake Valley		97·0		5,961·0	
Smith's Station	2·0	99·0	3·3	5,958·7	Bigler Lake Valley.
Junction Trail	9·0	108·0	65·9	5,882·8	" "
Daggett's Pass	2·5	110·5	941·8	6,824·6	Ascent to Pass.
" Ranch	3·5	114·0	2,407·1	4,417·5	Descent to Carson Valley.
Genoa	3·0	117·0	80·5	4,337·0	Mormon Station.

TABLE OF THE COMPARATIVE HIGHTS

Above the Level of the Sea, of the several Stations, Hills and Passes, on the Old Carson and Johnson Roads, arranged in the order of their Altitudes, as determined by the Aneroid Barometer, 1855.

	Hight.
Sacramento, levee	39
Mud Springs, El Dorado County	1,517
Diamond Springs	1,713
Placerville	1,755
Bartlett's Bridge over the South Fork of American River	2,532
Hawley's, seven miles from Placerville, on Ridge	2,674
Junction of Diamond Springs, (road), on Old Carson Road	3,737
Junction of Old Carson and Johnson Roads	3,942
Johnson Road, at north side of river, after having ascended hill from Bridge, brink of hill	4,043
Genoa, Mormon Station, Carson Valley	4,339
Daggett's Ranch, Carson Valley	4,417
Mott's Ranch, Carson Valley	4,445
Taylor's Ranch, on Old Carson Road, Cold Spring	4,517
Thorington's Ranch, Carson Valley	4,729
Johnson Road, at point where it turns up hill, from river, five miles below Slippery Ford	4,901
Cary's Mill, Carson Valley	5,032
Brockliss' Trading Post, (ridge), Johnson Road	5,254
Slippery Ford, on South Fork, Johnson Road	5,358
Camp Springs, Old Carson Road	5,497
Peavine Ranch, foot of Peavine Hill, Johnson Road	5,599
Boulder Hill, above Slippery Ford, Johnson Road	5,851
Smith's Station, Bigler Lake Valley	5,958
Lake Valley, foot of Johnson Pass	5,961
Silver Creek Ranch, Johnson Road	6,277
Summit of Peavine Hill, Johnson Road	6,410
Head of Carson Cañon, Hope Valley, Carson Road	6,488
Hope Valley, upper end of flat	6,535
Johnson Road, highest part of Ridge Road, at deserted trading post	6,549
Johnson Pass, highest point on Johnson Road	6,752
Head of Camp Creek, Alder Springs, Old Carson Road	6,795
Daggett's Pass, on trail from lake to Carson Valley	6,824
Leak Springs, Old Carson Road	7,027
Marlette's Flat, New Road	7,147
Clear Lake, between the summits of Old Carson Road	7,176
Luther's Pass, highest point on New Road	7,185
Red Lake, upper end of Hope Valley	7,248
Alder Hill, (summit), Old Carson Road	7,253
Volcano Road, Old Carson Road	7,261
Tragedy Springs, Old Carson Road	7,512
Carson Pass, summit of true divide, Old Road	7,973
West Pass, highest Point on Old Carson Road	9,036

TABLE OF APPROXIMATE DISTANCES, TOGETHER WITH APPROXIMATE ALTITUDES,

On the Sonora and Walker's River Immigrant Road, as deduced from observations taken with the Aneroid Barometer, by G. H. Goddard, Civil Engineer, during the Pacific Railroad Exploration under Lieut. Moore, U. S. A., October, 1853.

SONORA AND WALKER'S RIVER ROAD.

PLACE.	Approx. Distances.		Approx. Altitude.		REMARKS.
	Last Station.	Stockton	Last Station.	Sea Level.	
	miles.	miles.	feet.	feet.	
Stockton				26·5	Mean of 12 Observations.
Camp No. 2	18·0	18·0		158·6	" 5 "
Keeler's Ferry	20·0	38·0		292·5	" 4 "
Rock River House				534·0	Single "
Summit Hill				1,051·8	" "
Green Springs				1,200·0	" "
Shumacher's				1,522·0	
Wood's Creek				1,636·0	Above Jamestown, ½ mile.
Sonora	27·0	65·0		2,109·0	Mean of 6 Observations.
Bald Mountain Pass				2,940·0	Single "
Sulivan's Cr., Camp 5	5·0	70·0		2,667·0	Mean of 5 "
Judge Hoxley's				2,871·0	Single "
Staple's Ranch				3,433·0	" "
Foot of Ridge				4,086·0	" "
Camp No. 6	18·0	88·0		5,127·0	N. f'k Tuolumne. mean 5 Obs'vs.
Head Sugar Pine Cr.				5,702·0	Single Observation.
Summit Ridge				5,904·0	" "
On Divide				6,257·0	High point on divide.
Strawberry Flat	8·0	96·0		6,031·0	Mean of 5 Observations.
Green Mountain				8,445·0	Summit, (2 Observations.)
First Granite M'ting.				9,397·0	
Blue Lake	11·0	107·0		9,119·0	Camp No. 8.
Green Flat				9,292·0	At descent to Relief Valley.
Relief Valley		118·0		8,590·0	
Camp No. 9	4·0	122·0		8,970·0	On Middle Fork Stanislaus.
Breccia Pass	6·0	128·0		10,150·0	Head of Middle Fork.
Camp No. 10	5·0	133·0		9,840·0	On lake flat of Tuolumne.
Pass	5·0	138·0		10,133·0	Summit, central ridge Sierra.
Camp No. 11	1·0	139·0		10,027·0	In Green Basin of Summit.
Camp No. 12	15·0	154·0		8,016·0	On flat of Walker's River.
Breccia Hill				9,258·0	On West side of river.
Camp No. 13	14·0	168·0		8,251·0	On West Creek.
Camp No. 14	19·0	187·0		6,246·0	Round Flat, Walker's River.
Camp No. 15	18·0	205.0		5,936·0	Walker's R., last camp in plains.

METEOROLOGICAL OBSERVATIONS

Taken on the Survey of the Boundary Line between California and Carson Valley and during a Journey over the Old Carson and Johnson Roads, in connection with the Wagon Road Survey over the Sierra Nevada, by George H. Goddard, Civil Engineer.

PLACE.	Date.	Time.	Aneroid	Ther	Mt. Bar.	REMARKS.	
		h. m.	inches.	deg.	inches.		
Sac., S. Gen.'s Office.	Aug. 1	8	29·57	72		At 57 feet above Sea.	
" "	"	2	29·50	85·5		Weather cloudless.	
" "	" 2	8	29·57	73·2		" "	
" "	"	2	29·51	85·8		" "	
" "	" 3	10 A.M	29·58	77·5		" "	
" "	" 4	9·30	29·63	76·4		" "	
" "	" 5	10	29·65	82		" "	
" "	" 6	6	29·52	78		Start by Stage to Placerville.	
Wellington House ..	"	10·30	29·16	90		On road at foot of hills.	
Summit of hill	"		28·75	89			
On ridge.....	"		28·65	90		Pines first appear.	
Summit Divide	"	11·50	28·55	92		Between Cosumnes and American.	
El Dorado House ...	"	12	28·30	94			
Mud Springs	"	1·30	28·12	95			
Diamond Springs ...	"	2	27·92	95			
Placerville.....	"	3	27·87	96		Ground floor, Cary's Hotel.	
"	"	4·30	27·83	100	27·83	Mountain Barometer set at zero.	
"	"	10·30	27·87	78	27·77	The Float sinks.	
"	" 7	6	27·94	66·4	27·70	" "	
"	"	12	27·94	90	27·70	Float of M'tain Barometer sinking.	
"	"	10	27·85	78·7	27·65	" $\frac{1}{5}$ inch too low.	
"	" 8	7	27·92	69	27·64	" sinking.	
"	"	12	27·87	94	27·66	" $\frac{1}{5}$ inch too low.	
"	"	6	27·73	104	27·71	" "	
"	"	11	27·85	78	27·66	" "	
"	" 9	9	27·88	80·7	28·02	Mountain Barometer reset at zero.	
"	"	12	27·81	94·3	28·04	" "	
"	"	2	27·76	101	28·02	" "	
"	"	11	27·78	86·5	27·92	" "	
"	" 10	7	27·81	67·7	27·90	Overcast East wind.	
"	"	12	27·78	86·7	27·93	Cool day.	
"	"	6·30	27·68	90	27·89	Much Overcast.	
"	"	11	27·76	76	27·83	Bright night.	
"	" 11	6	27·82	64·5	27·84	Clear weather.	
"	"	10·30	27·83	75	27·94	" "	
"	"	3	27·78	88·2	27·95	" "	
"	"	11	27·86	70	27·95	Cold night.	
"	" 12	7	27·96	64	27·97	Bright Morning.	
"	"	11	28·01	69·5	28·08	Weather clear, with cold nights, smoky horizon, with breeze during day and calm at nights.	
"	" 13	7	28·97	64·2	28·10		
"	"	1	28·03	82·2	28·05		
"	"	6·30	28·00	84	28·02		
"	"	11	28·05	69·7	28·01		
"	" 14	7	28·06	64	27·83	-	- 12 for air bubbles.

METEOROLOGICAL OBSERVATIONS—Continued.

PLACES.	Date.	Time.	Aneroid	Ther.	Mt. Bar.	REMARKS.
		h. m.	inches.	deg.	inches.	
Placerville	Aug. 14	3	27·93	96·1	27·90	+ 12 = 28·02
"	"	11	28·00	76	27·89	+ 12 = 28·01
"	" 15	6·30	28·05	67	27·78	+ 12 = 27·90
"	"	12	28·00	88·3	27·80	+ 12 = 27·92
"	"	12	28 02	72·1		Air bubbles ascend tube.
"	" 16	7	28·03	68		Weather continues calm by night with West breeze by day.
"	"	2·30	27·87	96		
"	"	11	27·96	77·4		
"	" 17	7	27·98	71		Cloudless, but smoky.
"	" 18	3·30	27·95	77		
"	"	7·30	27·98	77·5		
"	"	1	27·94	88·2		
"	"	10·30	27·91	83		
"	" 19	7	27·96	86·3		
"	"	1	27·86	96		
"	"	12·30	27·93	76		
"	" 20	6·30	27·97	72·5		
"	"	3	27·86	100		
"	"	6	27·85	97		
"	"	12	28·00	74		
"	" 21	6	28·03	72·1		
"	"	1	27·94	98	28·20	Reset Mounting Barometer to zero.
"	"	6	27·87	100	28·15	
"	" 22	11	28·02	92·3		
"	"	4	27·88	103	28·10	
"	" 23	1	28·02	74	28·05	
"	"	8	28·20	77·5	27·95	
"	"	2	27·87	102	27·95	
"	" 24	7	27·75	92		
"	"	7·05	27·66	80		At Astronomical Station.
"	" 25	7	27·73	70		Cary's Hotel.
"	"	3	27·70	92		
Hawley's Camp, No. 1	" 26	1·30	26·78	66		Fine clear night.
" "	"	7	26·81	84·3		Weather cloudless.
" "	"	2	26·75	89·5		
" "	"	9	26·86	68		
" "	" 27	5 30	26·89	65		
" "	"	7 20	26·87	80		
Sportsman's Hall ...	"	9 15	26·33	81·5		
Foot of hill	"	10 15	26·08	84		
Junction House	"	11	25·73	89		Forks Carson and Johnson roads.
" Diamond Sp. R.	"	12	25·87	88		" " and Diamond Spr. r'ds.
Trading Post.....	"	1	25·31	88		
Cold Spring Ranch..	"	4	25·10	82		Taylor's House.
Camp 2, Camp Spr'gs.	"	11	24·25	55		Camp No. 2.
" "	" 28	6	24·24	54		
" "	"	7·20	24·18	76		
Summit of ridge	"	8·15	23·92	74		Weather cloudless, but smoky.
On ridge	"	9·30	23·82	70		
"	"	10·30	23·50	74		
Head Camp Creek...	"	11·40	23·14	76		
Summit Alder Hill ..	"	12·15	22·89	70		
2d summit, " ..	"	1	22·76	72		
Leak Springs.....	"	1·20	22·93	72·2		
Head of Gulch	"	1·30	22·95	74		
Summit of Ridge....	"	1·45	22·87	76		
Burnt Store.....	"	2	23·03	74		

METEOROLOGICAL OBSERVATIONS—Continued.

PLACE.	Date.	Time.	Aneroid	Ther.	Mt. Bar.	REMARKS.
		h. m.	inches.	deg.	inches.	
Junction of roads...	Aug. 28	2·45	22·76	73		Volcano Branch Road.
Granite Ridge.....	"	3·45	22·65	69·5		
Camp 3, Tr'gedy Spr's	"	5·15	22·53	60		Camp No. 3.
" "	"	8	22·58	46		
" "	" 29	6	22·55	47		
" "	"	9·30	22·56	60		
Summit of hill.....	"	10	22·32	67		
Valley	"	10·25	22·58	68		Valley running to South.
Foot Breccia Pass...	"	10·55	22·48	67.5		
Summit " ...	"	11·15	22·32	69·3		
Green Flat.....	"	12·10	22·32	68		
Shanty on ridge ...	"	1	21·96	69		
Summit Ridge.....	"	2·20	21·62	59		Wind rising from West.
Flat on ridge.....	"	2·50	21·57	63		
Summit Ridge.....	"	3·30	21·35	62		Strong S. W. wind.
" Pass.....	"	4·10	21·06	60		" "
" from peak..	"	4·45	20·85	56		Peak to right of road.
Camp No. 4.....	"	6	21·26	44·7		Under shelter of ridge.
" "	"	8	21·31	38		Clear night.
" "	" 30	6	21·28	41		
" "	"	7·40	21·23	61		Strong S. W. wind.
Camp 5, Clear Lake.	"	2·15	22·57	60		Clear weather.
" " ..	"	9·30	22·62	48		Clouds rising in East.
" " ..	" 31	7·30	22·67	42·8		Thunder storm from West.
" " ..	"	11	22·63	58		Fine weather again.
" " ..	"	8·30	22·66	38		
" " ..	Sept. 1	6	22·68	28		
" " ..	"	6·30	22·67	54		
" " ..	"	8	22·64	71		
" " ..	"	10·15	22·63	73	22·75	Set Mountain Barometer at zero.
" " ..	"	12	22·62	68	22·74	
" " ..	"	1·30	22·61	70	22·73	
" " ..	"	6	22·64	52	22·71	
" " ..	"	9·30	22·71	35·5	22·71	
" " ..	" 2	6·40	22·72	72·7	Broke.	
" " ..	"	3·30	22·64	70		
" " ..	"	9	22·70	42·8		
" " ..	" 3	6·30	22·70	42		
" " ..	"	6	22·56	64·2		Strong West wind.
" " ..	"	12	22·55	50		Very high West wind.
" " ..	" 4	4	22·47	62		Wind falling.
" " ..	"	11	22·55	33		Calm.
" " ..	" 5	5·45	22·55	30		Clear weather.
" " ..	"	1·45	22·54	70		
Summit Carson Pass.	"	4	21·88	59		
Red Lake.....	"	4·30	22·47	57		
Hope Valley.....	"	5	22·63	56		First bench in Valley.
"	"	5·15	22·80	67		Second "
"	"	6·15	23·04	45		Flat at foot of Spur.
"	"	7	23·12	48		Head of Cañon.
Carson Valley.....	"	9·30	24·40	54		Cary's Mill, clear night.
"	" 6	8	24·41	51		" calm morning.
"	"	9·20	24·42	56		"
"	"	11·10	24·14	97		Spur of Mt., 2 mls. fm Cary's R'nch.
"	"	12·15	24·74	88·3		
"	"	3	24·97	84·2		Mott's Ranch.
"	"	3·30	24·99	82		Dr. Daggett's.

METEOROLOGICAL OBSERVATIONS—Continued.

PLACE.	Date.	Time.	Aneroid	Ther.	REMARKS.
		h. m.	inches.	deg.	
Carson Valley.....	Sept. 6	4·15	25·03	78·0	Dr. Daggett's.
"	"	7·20	25·08	70·2	Mormon Station.
"	"	9·15	25·14	67·8	"
"	" 7	8	25·28	54·0	"
"	"	4	25·04	78·8	"
"	"	11	24·92	64·0	Thorington's Ranch.
"	" 8	7	25·05	62·3	"
"	"	9·15	24·98	68·0	"
"	"	1	24·85	75·0	"
"	"	4	24·18	83·0	Cary's Mill.
Hope Valley	"	6·30	23·12	62·0	Shanty at head of Cañon.
"	"	9	23·15	50·0	"
"	" 9	5·30	23·20	34·0	"
"	"	7·30	23·15	57·0	"
Luther's Pass	"	9·10	22·53	72·0	Summit of Pass.
Lake Valley	"	11	23·10	70·0	Spur, on leaving trail.
"	"	1·30	22·10	76·1	Top of Granite Ridge.
Head of Truckee ...	"	3	21·71	73·0	Summit of Divide.
Clear Lake	"	4·15	22·49	68·0	Return to Camp No. 5.
"	"	9·15	22·52	54·0	Clouds rising.
"	" 10	4·45	22·44	64·0	Strong West wind.
"	" 11	7	22·50	59·0	
"	"	5·15	22·47	62·0	Very windy.
"	" 12	6·30	22·58	38·0	Calm.
"	"	8·30	22·51	72·0	"
"	"	3·40	22·48	68·0	Strong West wind.
"	"	10	22·49	40·0	Calm night.
"	" 13	7	22·48	54·0	"
"	"	11·30	22·52	72·0	
Carson Pass.....	"	1·15	21·84	76·0	
Red Lake	"	2	22·40	73·0	
Hope Valley.....	"	2·45	22·71	73·0	First Bench on small Flat.
"	"	3·15	22·77	70·0	Second Bench on large Flat.
"	"	3·45	22·93	72·5	Foot of Spur, Hope Valley proper.
"	"	4·40	22·95	70·0	Camp No. 6, foot of Luther's Pass.
"	"	7·45	23·07	35·0	Calm bright night.
"	" 14	6·30	23·09	32·0	Fleecy clouds.
"	"	9·30	23·06	67·5	"
Luther's Pass	"	10	22·55	76 0	
Marlette's Flat	"	10·50	22·57	77·0	Lower end of Flat.
Lake Valley	"	12	23·48	77·0	Foot of ascent to Luther's Pass.
"	"	2	23·53	78·0	Smith's Post.
"	"	3	23·59	69·5	
Bigler Lake.....	"	6·30	23·62	58·0	Camp No. 7, at point of timber.
"	"	10	23·62	44·0	South end of Bigler Lake.
"	" 15	6	23·70	39·0	Calm morning.
"	"	11	23·60	65·0	
"	"	4	23·60	67·0	Wind rising.
"	"	6·30	23·59	54·0	Strong S. W. wind.
"	" 16	7	23·58	48·0	S. W. wind with clouds.
"	"	9·15	23·52	55·0	Camp No. 8, Astronomical Station.
"	"	5·30	23·56	48·0	Cold bleak wind.
"	"	10	23·53	43·0	
"	"	6·45	23·59	36·0	Snow clouds on mountains.
"	"	9	23·53	63·0	"
"	"	4·30	23·58	42·5	Raining heavily, with wind.
"	" 18	12·30	23·64	60·0	Fine morning, calm.

METEOROLOGICAL OBSERVATIONS—Continued.

PLACE.	Date.	Time.	Aneroid	Ther.	REMARKS.
		h. m.	inches.	deg.	
Bigler Lake.....	Sept 18	6·15	23·63	52·0	Heavy thunder storm to West.
"	"	10·50	23·72	32·0	Fine night, a few clouds.
"	" 19	9	23·71	57·0	Fine and calm.
"	"	10·30	23·74	37·0	Clear night, calm.
"	" 20	6·30	23·78	35·0	Fine and calm.
"	"	10	23·72	44·5	Cloudy night.
"	" 21	6·45	23·73	41.0	Clear morning.
"	"	10			Cloudy night.
"	" 22	8·30	23·63	59·0	Cumuli rising.
"	"	10	23·64	60·0	
Lake Valley.....	"	12·15	23·57	65·0	At junction of wagon road trail.
Daggett's Pass	"	1·45	22·74	61·0	Heavy rain cloud on Job's Peak.
"	"	3·30	22·77	49·0	Raining heavily in Carson Valley.
Carson Valley.....	"	4	24·93	61·0	At Dr. Daggett's.
"	"	6·45	24·95	59·5	At Mormon Station.
"	" 23	7·15	25·06	45·0	" bright day.
"	"	7	24·95	62·0	" red clouds at sunset.
"	" 24	7	25·09	44·0	" fine morning.
"	"	9	25·11	63·0	" beautiful calm day.
"	"	12·30	24·96	83·0	At Mott's Ranch.
"	"	9·30	25·12	70·0	" bright night.
"	" 25	1·45	25·14	65·0	" at starting up Valley.
"	" 26				" on return.
"	" 27	1·30	24·86	74·8	" windy day S. W.
"	"	7·30	25·00	60·0	" calm night.
"	" 28	7·30	25·07	59·7	" calm, at leaving.
"	"	9	25·10	74·0	At Dr. Daggett's, calm.
Daggett's Pass	"	11·15	22·80	74·0	
"	"	11·20	22·83	61·0	
Lake Valley	"	12·30	23·57	87·0	Junction of road and trail.
"	"	3·50	23·52	88·0	At Smith's Post.
"	"	4·45	23·48	72·0	Foot of Johnson's Pass.
Johnson's Pass.....	"	5·15	22·84	66·0	
Camp No. 9.....	"	5·45	22·95	63·0	On South Fork American River.
"	"	7·30	23·07	42·0	Fine clear night.
"	" 29	6	23·13	38·0	
"	"	10·45	23·11	65·0	
"	"	1·30	23·07	72·0	
"	"	3·15	23·04	71·0	S. W. wind rising.
Summit Hill	"	5	23·40	72·0	Above Slippery Ford.
" of granite hill.	"	5·10	23·55	72·0	"
Slippery Ford	"	5·50	23·96	72·0	At Log Cabin.
Camp No. 10.....	"	6·15	24·12	60·0	One mile below Slippery Ford.
"	"	7·30	24·21	48·0	Fine night.
"	" 30	5·30	24·24	44·0	Fine clear morning.
"	"	6·30	24·26	44·5	At starting.
Foot of hill	"	7·30	24·50	56·0	
Silver Creek Ranch..	"	9·15	23·38	76·0	Head Gulch, falling into South Fork.
Divide	"	9·35	23·27	75·0	Between South Fork and Silver Creek.
Burnt Store.....	"	10·15	23·18	84·0	Halt on ridge.
"	"	12	23·25	70·0	"
Summit, Peavine Hill	"	1·45	23·39	82·0	
Foot of hill.....	"	2·30	24·06	87·0	At lower ridge.
Brockliss'	"	3·10	24·34	85·0	Trading Post.
Point of Ridge.....	"	6	25·35	74·0	Above the bridge.
Rodger's Bridge	"	6·45	26·72	72·0	Over South Fork American River.
"	"	9	26·77	64·0	Calm.

METEOROLOGICAL OBSERVATIONS—Continued.

PLACE.	Date.	Time.	Aneroid	Ther.	REMARKS.
			inches.	deg.	
Rodger's Bridge	Oct. 1	6	26·79	57·0	Calm, but very smoky.
"	"	7·10	26·80	59·0	" "
Bench on hill	"	7·25	26·27	63·0	" "
Junction House	"	8·10	25·54	76·0	Forks of Carson and Johnson roads.
Mountain Ranch....	"	8·40	25·80	77·0	Summit Ridge.
Sportsman's Hall ...	"	9·20	25·98	84·0	"
Hawley's.....	"	10·40	26·44	95·0	Elk Horn House.
Placerville.....	"	1·25	27·45	96·0	Cary's Hotel, second story.
"	"	7·30	27·54	79·0	Calm day.
"	"	9·30	27·56	76·0	"
"	"	10·50	27·54	72·0	"
"	" 2	6	27·62	63·0	Cary's Hotel, second story.
"	"	7	27·65	63·4	" "
"	"	1·35	27·50	90·0	" "
"	"	8·30	27·52	78·0	" "

BAROMETRICAL REGISTER

Kept at Sacramento, by Dr. Logan, for the months of August and September, 1855.

1855.	Sunrise.		3 P. M.		10 P. M.		1855.	Sunrise.		3 P. M.		10 P. M.	
August.	Bar.	Ther.	Bar.	Ther.	Bar.	Ther.	Sept.	Bar.	Ther.	Bar.	Ther.	Bar.	Ther.
1	29·71	60	29·69	86	29·80	68	1	29·79	60	29·82	80	29·85	64
2	29·72	63	29·72	77	29·73	67	2	29·85	60	29·85	78	29·85	66
3	29·73	64	29·73	88	29·74	70	3	29·83	62	29·77	83	29·78	66
4	29·77	64	29·79	90	29·78	73	4	29·78	61	29·75	80	29·72	68
5	29·82	67	29·78	88	29·77	73	5	29·73	60	29·73	89	29·73	68
6	29·77	66	29·75	90	29 72	72	6	29·79	60	29·78	86	29·78	70
7	29·72	62	29·67	93	29·68	76	7	29·78	60	29·80	90	29·77	74
8	29·69	68	29·68	98	29·62	76	8	29·77	62	29·74	91	29·69	76
9	29·62	70	29·63	93	29·59	68	9	29·67	66	29·67	85	29·75	66
10	29·61	66	29·56	81	29·54	66	10	29·67	62	29·71	79	29·68	62
11	29·59	61	29·58	77	29·59	64	11	29·68	54	29·67	82	29·68	62
12	29·73	60	29·73	78	29·74	66	12	29·74	58	29·69	80	29·70	61
13	29·88	62	29·86	80	29·83	68	13	29·71	56	29·69	83	29·71	62
14	29·81	65	29·82	85	29·78	69	14	29·73	58	29·73	79	29·74	64
15	29·78	64	29·79	86	29·79	66	15	29·74	62	29·73	76	29·74	66
16	29·79	62	29·77	89	29·80	70	16	29·74	58	29·69	71	29·74	60
17	29·77	62	29·75	92	29·75	77	17	29·72	58	29·72	75	29·77	60
18	29·75	69	29·75	88	29·73	76	18	29·79	54	29·77	76	29·77	63
19	29·75	68	29·73	88	29·73	73	19	29·79	56	29·77	79	29·77	62
20	29·77	66	29·75	90	29·76	71	20	29·79	57	29·76	77	29·74	60
21	29·79	64	29·80	90	29·82	71	21	29·71	57	29·71	73	29·76	59
22	29·82	65	29·82	93	29·82	74	22	29·75	56	29·73	73	29·76	58
23	29·82	68	29·77	93	39·75	72	23	29·78	54	29·78	73	29·80	64
24	29·71	66	29·66	87	29·64	68	24	29·82	58	29·83	80	29·83	68
25	29·69	66	29·69	86	29·74	68	25	29·81	56	29·77	85	29·73	72
26	29·82	64	29·81	81	29·82	68	26	29·71	61	29·68	90	29·65	72
27	29·87	62	29·83	85	29·80	66	27	29·68	62	29·65	84	29·66	63
28	29·82	62	29·77	83	29·70	63	28	29·70	56	29·70	89	29·72	71
29	29·76	63	29·72	85	29·74	69	29	29·84	62	29·77	86	29·83	69
30	29·77	64	29·77	83	29·77	66	30	29·82	60	29·79	88	29·77	74
31	29·77	60	29·78	80	29·79	64							

BAROMETRICAL REGISTER

Kept at Coloma, El Dorado County, by W. Zelmer.

Approximate Latitude. Longitude. Altitude above Sea, 857 feet.

1855.	Thermometer.			Barometer.		Course of Wind.	REMARKS.
August.	8 A. M	2 P. M.	8 P. M.	Morning.	Evening.		
1	72	93	81	29·06	29·10	N. N. W.	Pleasant.
2	81	92	81	29·09	29·10	N. N. E. N. W.	"
3	80	98	87	29	29	" "	"
4	83	95	81	29	29	N. E. E. N. E.	"
5	78	98	81	29·05	29	N. E. N. W.	"
6	80	98	84	29·15	29·15	N. W.	Warm.
7	82	100	82	29·10	29·10	"	"
8	82	102	82	26·10	29·15	N. E. N. W.	"
9	82	90	70	29·10	29·10	E. N. E.	Pleasant.
10	82	90	72	29·15	29·10	"	"
11	66	86	74	29·20	29·20	N. N. W.	"
12	66	84	70	29·20	29·20	"	Warm.
13	66	92	72	29·20	29·23	"	"
14	68	92	72	29·22	29 22	N. W.	"
15	70	90	82	29·22	29·24	"	"
16	70	98	82	29·22	29·20	"	Sultry and Shower.
17	72	98	88	29·21	29·25	"	Hot.
18	80	96	82	29·22	29·25	N. E.	"
19	80	97	84	29·22	29·22	E. N. E.	"
20	70	97	85	20·20	29·25	N. E.	"
21	80	98	92	29·01	29·23	E. N. E.	"
22	81	100	90	29	29·26	W. N. W.	"
23	82	96	86	29·25	29·25	N. W.	"
24	80	95	80	29·21	29·22	S. E.	"
25	80	92	76	29·22	29·22	N. W.	"
26	69	92	76	29·24	29·24	"	"
27	68	92	76	29·28	29·22	"	Pleasant.
28	60	88	70	29·22	29·24	"	"
29	65	86	72	29·22	29·22	"	"
30	68	86	72	29·22	29·22	N. N. E.	"
31	65	84	60	29·20	29·22	N. W.	Shower.

LIST

Of the several Stations of the Triangulation on the Eastern Boundary and Wagon Road Survey.

A. Station at south-east end base line, Bigler Lake triangulation.
B. Station at west point of timber, Bigler Lake.
C. Summit of Chrystal Peak.
D. Station on Peak above Daggett's Pass.
E. Station on Elephant Mountain, south of Old Carson Pass.
F. Summit of highest peak of Job's Group of Mountains.
G. Astronomical Station, Clear Lake Valley, north end base line.
H. Station at east end of first and second base lines, Clear Lake.
I. Station at east end of second base line, Clear Lake.
J. Station on Job's East Peak, above Carson Valley.
K. Station on North Granite Knob, Bigler Lake Valley.
L. Summit of Little Thimbal Rock, near Clear Lake.
M. Station on Obelisk Hill.
N. Station on Round Top Mountain.
O. Summit of west peak Job's Group of Mountains.
P. Station on Pyramid Peak.
Q. Station at south end of prolonged base, Carson Valley.
R. Station on Red Mountain, north of Carson Pass.
S. Station on Snow Peak, east of highest summit of Old Road.
T. Astronomical Station, south end of Bigler Lake.
U. Station north-west end of base line of Bigler Lake.
V. Station north end base line of Carson Valley.
W. Station south end measured base line of Carson Valley.
X. Station to east of last Station, Carson Valley.
Y. Summit of Cary's Peak, south of Carson Cañon.

TRIANGULATION TABLE.

Triangles.		Angles.			Log Sines.	Sides.	Length in chain.		Logs of chain.
		deg.	min.	sec.			chains.	links.	
Ast. Sta.	3, T	66	10	50	9·961337	T A	78	08	1·892540
(1)	A	95	39	40	9·997872	Base, A K	229	20	2·360218
	K	18	09	30	9·493660	T K	249	32	2·396752
(2)	T	62	22		9·947401	T K	249	32	
	K	17	35		9·480140	K B	224	32	2·350869
	B	100	03		9·993284	T B	76	49	1·883608
(3)	T	118	12		9·945125	T B	76	49	
	B	56	18		9·920099	T F	653	95	2·822134
	F	5	30		8·981573	F B	703	33	2·847160
(4)	B	75	50		9·986587	K B	224	32	
	K	71	30		9·976957	B C	394	12	2·595633
	C	32	40		9·732193	K C	402	96	2·605263
(5)	K	31	10		9·713935	K C	402	96	
	P	28	30		9·678663	K P	728	89	2·862662
	C	120	20		9·936062	P C	437	05	2·640535
(6)	A	67	55		9·966910	A K	229	20	
	K	87	40		9·999640	A O	554	02	2·743520
	O	24	25		9·616338	K O	513	80	2·710790
(7)	T	59	41	20	9·936161	T F	653	95	
	D	70	51	10	9·975284	T D	534	10	2·727626
	F	49	27	30	9·880776	D F	616	75	2·783011
(8)	D	9	00	00	9·194332	P C	437	05	
	P	20	58	41	9·553896	P D	1,396	00	3·144884
	C	150	01	19	9·698682	D C	1,000	02	3·000098
(9)	V	110	05		9·972755	Base, V W	160	00	2·204120
	W	48	35		9·875014	W D	413	07	2·616020
	D	21	20		9·560855	V D	329	82	2·518279
(10)	V	33	30		9·741889	Base, V W	160	00	
	W	136	30		9·837812	W J	508	55	2·706339
	J	10	00		9·239670	V J	634	25	2·802262

TRIANGULATION TABLE—Continued.

Triangles.		Angles.			Log Sines.	Sides.	Length in chain.		Logs of chain.
		deg.	min.	sec.			chains.	links.	
(11)	V	13	40		9·373414	V W	160	00	
	W	105	35		9·983735	W X	43	33	1·636771
	X	60	45		9·940763	V X	176	64	2·247092
(12)	V	49	12	33	9·879153	V X	176	64	
	X	116	47	27	9·951320	V J	634	25	
	J	14	00	00	9·383675	X J	537	15	2·730095
(13)	V	56	20		9·920268	V X	176	64	
	X	108	45		9·976318	V F	649	80	2·812778
	F	14	55		9·410622	X F	571	12	2·756728
(14)	V	33	30		9·741889	V J	634	25	
	Q	43	55		9·841116	V Q	892	40	2·950587
	J	102	35		9·989441	Q J	504	70	2·730350
(15)	Q	73	15	00	9·981171	Q J	504	70	
	J	61	58	47	9·945854	J Y	667	07	2·824172
	Y	44	46	13	9·847736	Y Q	591	85	2·772208
(16)	V	76	35	00	9·987892	V D	329	82	
	J	29	54	32	9·697770	V J	634	25	
	D	73	30	28	9·981753	J D	643	28	2·518279
(17)	G	68	38		9·969075	Base, G H	34	96	1·5434069
A B Base,	H	56	55		9·9231805	G I	35	99	1·5561659
	I	54	27		9·9104155	H I	40	00	1·6020600
(18)	G	127	07		9·90168	G I	35	99	
	I	41	08		9·81810	M I	141	05	2·14938
	M	11	45		9·30886	G M	116	36	2·0658037
(19)	I	139	50		9·80957	M I	141	05	
	M	25	33		9·634778	M S	360	48	2·55695
	S	14	37		9·40200	S I	235	59	2·37216
(20)	G	58	04		9·928763	G M	116	36	
	M	88	46		9·999899	G N	212	67	2·327706
	N	33	10		9·738048	N M	180	52	2·25652
(21)	M	119	22		9·94027	M I	141	05	
	I	31	56		9·72340	R I	254	97	2·40821
	R	28	42		9·68144	M R	155	26	2·19135

TRIANGULATION TABLE—Continued.

Triangles.		Angles.	Log Sines.	Sides.	Length in chain.	Logs of chain.
		deg. min. sec			chains. links.	
(22)	N	126 54	9·90292	N S	489 11	
	S	36 10	9·77095	S F	1,342 90	3·12805
	F	16 56	9·46428	N F	991 01	2·99608
(23)	N	36 33	9·77490	N M	180 52	
	M	126 06	9·90741	N S	489 11	2·68941
	S	17 21	9·47452	M S	360 48	2·55690
(24)	N	148 31	9·71788	N S	489 11	
	S	19 20	9·51991	S P	1,204 90	3·08095
	P	12 09	9·32319	P N	763 79	2·88297
(25)	P	55 49	9·9164272	N P	763 79	2·882974
	F	39 36	9·8065575	N F	991 01	2·996080
	N	84 35	9·9980563	P F	1,192 60	3·076502
(26)	M	41 32	9·82155	M R	155 26	
	R	105 43	9·98345	R E	190 86	2·28072
	E	32 45	9·73318	M E	276 45	2·44162
(27)	R	99 32	9·99396	R E	190 86	
	E	61 07	9·94231	R Y	504 37	2·702758
	Y	19 21	9·52027	E Y	568 10	2·754410
(28)	G	67 50	9·966653	G M	116 36	
	M	87 46	9·999670	M E	276 45	
	E	25 24	9·632392	G E	289 26	2·461308
(29)	R	40 45	9·814753	R Y	504 37	
	Y	109 45	9·973671	J Y	667 07	2·824172
	J	29 30	9·692339	R J	964 03	2·984090
(30)	N	51 12	9·891719	N R	763 79	
	K	54 45	9·912031	K P	728 89	
	P	74 03	9·982950	N K	899 28	2·953893
(31)	N	42 29	9·82954	N S	489 11	
	L	103 31	9·98780	N L	281 04	2·44917
	S	34 00	9·74756	L S	351 81	2·54637
(32)	P	18 20	9·49768	N P	763 79	
	N	105 02	9·980519	N L	281 04	
	L	56 38	9·921774	P L	874 42	2·941719

LIST OF FLOWERS

Gathered on Survey of Carson Road, Sept., 1855, *and named by Dr. Kellogg of San Francisco.*

PLACERVILLE.

Photenia, specimen (29), growing in newly dug ground, on water ditch, on hill side.
Erigsimum (17), wall flower, yellow.
Solidago (30 and 37), yellow and deep blue.
Pulmonaria (35), yellow.
Eriogonum (34), purple and white.
Eucharidium (21), violet.
Astar (36), deep blue.
Peutsternum (19), blue and white.

HAWLEY'S.

Solidago (22), yellow.
Gnaphalium (32), white.
Eriogonum (31), yellow.
Astar (18), light blue.
Gilia (16), deep blue.

HEAD OF CAMP CREEK.

Mimulus (41), bright yellow.
Lupinus (23), blue.

Astar (38), blue ; (27) white.
Gnaphalium (39), white.
Cautua (42), rose red.
Astar (26 and 44), varieties of blue.

TRAGEDY SPRINGS.

Chrysipsis (45), yellow.
Senecis (24), yellow and (46) purple.

WEST SUMMIT.

Sarradia (12), red.
Enia (9 and 47), several varieties of heath.
Gilia (15), white.
Epilobium (4), deep blue.

CLEAR LAKE VALLEY.

Mimulus (33), violet.
Chloropion, of Behur (13), purple.
Delpinum (40), blue.
Erilobium (1), blue.
Gnaphalium (13), white.
Sida (43), purple.

CARSON PASS.

Mimulus Splendors (14), deep red.

CARSON VALLEY.

Arclostaphylas, shrub.
Juniperous, shrub.
Œnothera, white.
Happlopappus, artemesia yellow.

There are several more flowers and shrubs, of which I have not the names, and which required further examination.

NOTES ON THE ASTRONOMICAL OBSERVATIONS.

The chronometers were both rated to Greenwich mean time. The following are the rates furnished with the chronometers by Mr. Thomas Tennent of San Francisco:

DENT'S, 1,946,

	min.	sec.
Is this day fast of Greenwich mean time	2	10·6
Loses daily six-tenths of a second	·0	0·6

July 12, 1855.

PARKINSON & FRODSHAM'S, 1,628,

	min.	sec.
Is this day slow of Greenwich mean time	10	30·5
Gains daily three-tenths of a second	0	0·3

July 12, 1855.

The chronometers were brought from San Francisco to Sacramento by steamer in the most careful manner. The observations made for rating them here, made chronometer 1,946, which I shall call Chronometer Dent, to be gaining instead of losing, and 1,628 to be losing instead of gaining. The unsteadiness of the ground, however, made these observations rather uncertain.

On July 30th, the following comparisons were made by telegraph with Mr. Pace at San Francisco:

Greenwich Mean Time, transmitted by Mr. C. Pace, from San Francisco.			Time, by Dent, 1,946.		
hours.	min.	sec.	hours.	min.	sec.
12	47	00	12	49	20
12	49	00	12	51	20
12	55	00	12	57	20·5
1	09	00	1	11	20·5
1	15	00	1	17	21

I transmitted my time to him three times, and received answer that I was two minutes twenty seconds too fast. It appeared by this that Chronometer Dent was gaining two and a quarter tenths of a second per day, and Chronometer 1,628 was losing seven and a half tenths per day, being nearly the reverse of the rates given by Mr. Tennent. I therefore wrote to him, stating the circumstance, inquiring if an error had not been made in copying off the rates he sent me, to which he replied that the rates he had given were correct at that time.

The observations at Placerville showed that a material increase in their rates had taken place. On August 23d a comparison by telegraph with Mr. Pace's true Greenwich time at San Francisco, gave the following result:

Greenwich Mean Time, transmitted by Mr. C. Pace, from San Francisco.			Time, by Dent, 1,946.		
hours.	min.	sec.	hours.	min.	sec.
8	00	00	8	04	07·5
8	05	00	8	09	13
8	19	58	8	24	12·5

The first and second observations were made without the telegraph lines of the two companies being connected, the last was made in connection, and appeared to be a very perfect observation. This result made Dent 1,946 to be 4′ 14·5″ too fast, having gained 114·5″ in twenty-four days, or a gain of 4″ and nearly eight-tenths per day. By the mean of the several observations, however, during our stay at Placerville, it appeared to be gaining 5·6″ per day during the first part of our stay there, and nearly six seconds per day during the last week. It is probable that from leaving Sacramento the rate increased daily that shown at Sacramento to that of the last week in Placerville.

The rate during our stay at Clear Lake Valley was 6·1″ per day.

On reaching Bigler Lake the rate decreased to about 4·9″ daily. The badness of the weather there allowed me very few good observations. The chronometer was then carried over into Carson Valley, but only one set of observations were then taken, as stated in the journal, and on our return journey no observations were taken.

On returning the chronometers to Mr. Tennent on Nov. 14th, Chronometer Dent 1,946, was 10′ 46·8″ fast of Greenwich mean time.

The chronometer used in all the following observations was Dent 1,946, except when expressed to the contrary.

ASTRONOMICAL OBSERVATIONS.

PLACERVILLE, EL DORADO COUNTY.—Astronomical Station 1.

Determination of Time, August 9, 1855.—*Afternoon Observation.*

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time by Chron.			Double Altitude.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
11	43	02	76	49	10	Upper.	Chronometer rated to Greenwich Mean Time.
11	45	42	76	49	10	Lower.	Barometer, 27·80.
11	47	50	74	58		Upper.	Thermometer, 100.
11	50	29	74	58		Lower.	Index error, Sextant, 12′ 55″.
11	52	29	73	10	10	Upper.	
11	55	10	73	10	10	Lower.	
11	57	30	71	14	20	Upper.	
12	00	12	71	14	20	Lower.	
12	01	45	69	34	20	Upper.	
12	04	27	69	34	20	Lower.	

Determination of Latitude.

DOUBLE ALTITUDES OF POLARIS.

17	24	33	77	24	00		Barometer, 27·78.
17	44	51	77	33	40		Thermometer, 86·5.
17	52	05	77	36	50		
17	55	59	77	38	30		
17	03	43	77	42	40		
17	06	50	77	47	20		

Determination of Latitude.

DOUBLE ALTITUDES OF ALTAIR AND JUPITER IN THE EAST.

Altair in the East.						Jupiter in the East.					
Time.			Double Altitudes.			Time.			Double Altitudes.		
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.	deg.	min.	sec.
18	16	22	119	04	30	18	37	05	57	15	10
18	20	46	119	23	50	18	42	41	58	41	20
18	24	58	119	32	30	18	47	45	59	57	50
18	27	17	119	43	00	18	50	39	60	35	10
18	30	42	119	46	20	18	56	87	61	44	10

Determination of Time—August 10, 1855.

EQUAL ALTITUDES OF THE SUN.

Time, A. M.			Double Altitudes.			Time, P. M.			Limb.	REMARKS.	
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.		barometer.	thermometer.
4	19	46	70			12	02	25	Upper.		
4	22	24	70			11	59	44	Lower.	A. M., 27·78	86·7.
4	24	56	72			11	57	18	Upper.	P. M., 27·68	90.
4	27	36	72			11	54	39	Lower.	Smoky atmosphere.	
4	30	03	74			Lost.			Upper.		
4	32	51	74			11	49	24	Lower.		

For Index Error Sextant—Sun's double diameter.

min.	sec.			min. sec.
44	00		Reading on the Arc.....	44 00
19	16		" off "	19 16
63	16	Double Diameter.		24 44
15	49	Semi "	Index error.....	12 22

Determination of Latitude, August 10, 1855.

DOUBLE ALTITUDES OF POLARIS AND A AQUILÆ ON THE MERIDIAN.

Polaris in the East.						A Aquilæ on the Meridian.					
Time.			Double Altitudes.			Time.			Double Altitudes.		
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.	deg.	min.	sec.
17	06	04	76	57	10	18	14	38	119	10	00
17	16	56	77	10	00	18	20	20	119	29	10
17	21	59	77	14	20	18	25	59	119	40	00
17	26	05	77	17	00	18	32	56	119	47	50
17	34	02	77	19	30	18	37	58	119	43	40
17	39	55	77	27	30	18	43	54	119	34	50
17	48	48	77	29	10	18	51	12	119	15	40
17	52	02	77	33	50	18	55	32	118	50	00
17	56	27	77	40	10						
18	00	30	77	42	20						

Barometer, 27·76 Thermometer, 76.

Determination of Time, August 11, 1855.

ALTITUDES OF THE SUN IN THE WEST, TAKEN WITH THEODOLITE.

Time.			Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
13	45	15	14	14	30	Lower.	Barometer, 27·78.
13	48	24	14	08	00	Upper.	Thermometer, 88·2.
13	51	53	13	28	00	"	Index error—1′.

ALTITUDES OF THE SUN, WITH ALTITUDE AND AZIMUTH INSTRUMENT.

Time.			Alt., Up. and Low. Limbs.			Time.			Alt., Up. and Low. Limbs.		
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.	deg.	min.	sec.
14	8	20				14	22	35·5			
14	10	50·5	9	48	25	14	25	06·5	6	59	00

Determination of Latitude and Meridian, with Altitude and Azimuth Instrument, August 11.

POLARIS AT EASTERN ELONGATION.

Time.			Altitude of the Three Verniers.									Azimuth.		
hours	min.	sec.	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.
17	51	02	38	51	20	21	08	35	81	08	30	69	59	10

	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.
Index error, from Zero, on Altitude Circle.								05	50
Second Vernier reading.....	60	00	00	—21	08	35	=38	51	25
Third " " 120	00	00	—81	08	30	=38	51	30	
Mean corrected reading of Three Verniers.							38	46	20
Approximate Meridian on Azimuth.....							68	06	35

Meridian Altitude of Polaris, August 12, 1855.

Time, A. M.	First Vernier.			Second Vernier.			Third Vernier.			Azimuth.		
	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.	deg.	min.	sec.
	40	22	30	19	37	05	79	36	20	68	06	35

Determination of true Meridian, by Transits of S. Ursæ Minoris and Cephei—51 Hev., August 12.

Time.			Wire.	Altitude.			OBJECT.
hours	min.	sec.					
16	57	25	Second Wire.				S. Ursæ Minoris.
17	00	59	Center "				" "
17	15	59	Second "				Cephei—51 Hev.
17	20	15	Center "	36	02	05	" "

Barometer, 28·01. Thermometer, 69.5.

Determination of Time, with the Altitude and Azimuth Instrument, August 14, 1855.

ALTITUDES OF THE SUN IN THE WEST.

Time.			Wires.	Time.			REMARKS.	
Lower Limb.				Upper Limb.			Altitude, 21° 51′ 05″.	
hours	min.	sec.		hours	min.	sec.	Striding Level –	– 2′.
13	01	43	First Wire.	13	04	25	Axis Level –	– 7′ 30″.
13	01	57	Center "	13	04	40	Barometer, 27·93.	
13	02	13	Third "	13	04	56	Thermometer, 96·1.	

Determination of Latitude, August 15, 1855.

ALTITUDES OF POLARIS IN THE EAST.

Time.			Altitude.			Striding Level.		Circle Level.		REMARKS.
hours	min.	sec.	deg.	min.	sec.	E	W	N	S	
17	45	40	38	39	30	42	48	50		Face West.
17	56	06	38	43	15	43	47	50		Azimuth, 70° 05′ 30″.
18	06	41	39	07	10	46	45	50		First Wire, Face East.
18	14	04	39	07	10	46	45	50		Second Wire "
18	22	09	39	07	10	46	45	50		Third " "
18	29	18	39	12	35			50		Azimuth, 69° 56′ 10″.
19	11	25	39	28	45	45·5	46·5	50		
19	22	50	39	14	05			50		Face West.

Value of one division on Circle Level..... 5″.
Equal to an error in adjustment of –|– 4′.

Barometer, 28·02. Thermometer, 72·1.

Determination of Time, with the Altitude and Azimuth Instrument, August 16, 1855.

EQUAL ALTITUDES OF THE SUN.

Time, A. M.			Wire.	Time, P. M.			Limb.	REMARKS.
hours	min.	sec.		hours	min.	sec.		
4	10	12	First Wire.	12	11	04	Upper.	Altitude 31° 56′ 15″.
4	10	27	Second "	12	10	47	"	Striding Level.
4	10	43	Third "	12	10	34	"	33 N. 42 S.
4	12	50	First "	12	08	23	Lower.	Circle Level, 50 E.
4	13	11	Second "	12	08	07	"	
4	13	26	Third "	12	07	54	"	
4	32	23	First "	11	50	02	Upper.	Altitude 36° 12′ 05″.
4	32	40	Second "	11	49	47	"	Striding Level.
4	32	54	Third "	11	49	31	"	35 N. 33 S.
4	35	08	First "		lost.		Lower.	Circle Level, 50 E.
4	35	24	Second "		lost.		"	Barometer 27·87.
4	35	40	Third "		lost.		"	Thermometer 96·0.

Determination of Latitude with Theodolite.

POLARIS IN THE EAST.

Time.			Altitudes.			Time.			Altitudes.		
hours.	min.	sec.	deg.	min.	sec.	hours.	min.	sec.	deg.	min.	sec.
16	45	31	38	24	30	17	09	53	38	32	00
16	48	08	38	25	30	17	12	26	38	33	30
16	51	45	38	28	30	17	14	41	38	34	00
16	54	21	38	29	00	17	16	07	38	34	15
16	58	35	38	30	00	17	17	50	38	34	45
17	04	55	38	31	00	17	20	08	38	36	00
17	08	27	38	31	30	17	21	59	38	37	00

Determination of Latitude with Theodolite.

ALTITUDES OF POLARIS IN THE EAST.

Time.			Altitude.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
17	24	01	38	37	30	Index error, 1 minute.
17	25	06	38	39	00	
17	26	30	38	39	15	
17	27	31	38	39	30	Barometer, 27·96.
17	28	34	38	40	00	Thermometer, 77·4.
17	33	00	38	41	15	At Eastern Elongation, N. 15, 30 W.

Easterly Variation of Compass, 17° 23′.

Determination of Time, with the Altitude and Azimuth Instrument, August 17th, 1555.

ALTITUDES OF THE SUN.

Time, P. M.			Wire.	Limb.	REMARKS.	Time, P. M.			REMARKS.
hours	min.	sec.				hours	min.	sec.	
12	54	12	First.	Lower.	Striding Level.	13	13	01	Striding Level.
12	54	25	Second.	"	33·5 W. 31·5 E.	13	13	16	33·5 W. 31.5 E.
12	54	41	Third.	"	Circle Level.	13	13	31	Circle Level.
12	56	52	First.	Upper.	45 W.	13	15	43	50 W.
12	57	07	Second.	"	Altitude.	13	15	57	Altitude.
12	57	22	Third.	"	22° 46′ 20″.	13	16	12	18° 43′ 35″.

Barometer, 27·98. Thermometer, 71·0.

Determination of Latitude.

ALTITUDES OF POLARIS IN THE EAST.

Time.			Altitude.			REMARKS.
hours	m'n.	sec.	deg.	min.	sec.	
17	33	56	38	54	45	Circle Level, 50 W.

Determination of Time, with the Altitude and Azimuth Instrument, August 17, 1855.

ALTITUDES OF ARTURUS IN THE WEST AND SIRIUS IN THE EAST.

Time.			Altitude.			Striding Level.		Circle Level.		OBJECT.
hours	min.	sec.	deg.	min.	sec	N	S	E	W	
18	30	30	12	27	50	42	45		50	Arturus.
18	34	13	11	41	20	42	45		50	"
18	39	09	10	51	25	42	45		50	"
19	57	00	18	34	35	42	46	50		Sirius.
20	02	31	18	53	25	42	46	50		"
20	09	34	19	29	55	42	46	50		"

Determination of Longitude.

ECLIPSE OF FIRST SATELLITE OF JUPITER—DISAPPEARANCE.

Time.			REMARKS.
hours	min.	sec.	
19	36	30	Becomes very faint.
19	37	15	Quite disappeared.

Determination of Time, August 19, 1855.

EQUAL ALTITUDES OF THE SUN, WITH SEXTANT.

Time, A. M.			Double Altitude.			Time, A. M.			Limb.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.	
4	44	08	76	13	50	11	36	28	Upper.
4	46	54	76	13	50	11	33	41	Lower.

Thermometer, 96·0. Barometer, 27·86.

Determination of Longitude, August 19, 1855.

REAPPEARANCE OF THE FIRST SATELLITE OF JUPITER—FROM OCCULTATION.

Time.	REMARKS.
hours min. sec.	
16 26 21	Satellite becomes distinctly visible.

Determination of Latitude, with Altitude and Azimuth Instrument.

ALTITUDES OF POLARIS IN THE EAST.

Time.	Wire.	Altitude.	Striding Level.		Circle Level.	
hours min. sec.		deg. min. sec.	E	W	N	S
17 10 50	First.	38 36 15	42	44	16·5	19·5
17 19 00	Second.	38 36 15	42	44	16·5	19·5
17 26 03	Third.	38 36 15	42	44	16·5	19·5

Azimuth of Polaris at Eastern Elongation, 64° 34′ 10″.

Determination of Latitude, with Altitude and Azimuth Instrument.

TRANSITS OVER THE MERIDIAN.

Time.	Altitude.	Object.	REMARKS.
hours min. sec.	deg. min. sec.		
18 25 43	38 25 00	A Capricornus.	Azimuth of Meridian, 62° 42 35″.
19 03 29	74 10 00	E Cepheus.	Error..... 1′ 00″.
19 39 21	45 09 55	B Aquarii.	
20 03 25	13 29 25	Y Gruis.	62° 41′ 35″.

Determination of Time, August 20, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitude.			Time, P. M.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.		
4	03	26	60	19	40	12	14	11	Upper.	Barometer.
4	06	09·5	60	19	40	12	16	53·5	Lower.	Thermometer.

Index error of Sextant ——.

Transits over the Meridian, with the Altitude and Azimuth Instrument, August 20, 1855.

FACE EAST.

Time.			Wire.	Altitude.			Object.	REMARKS.
hours	min.	sec.		deg.	min.	sec.		
14	00	57	First.	28	32	35	Moon F L.	Circle Level, 41 N.
14	01	11	Second.	Upper Limb.			"	
14	01	25	Center.	"			"	
14	01	38	Fourth.	"			"	
14	01	05	Fifth.	"			"	
16	22	09	First.	42	03	25	S Ursæ Min.	" 25 N.
16	25	58	Second.	42	03	25	"	
16	32	28	Fourth.	42	03	25	"	Star descending.
16	36	47	First.	35	54	50	Cephei (51 Hev.)	Circle Level, 25 N.
16	40	50	Second.	35	54	50	"	
16	44	53	Third.	35	54	50	"	Star rising.
16	52	28·5	Center.	69	22	25	Star in Hercules.	Circle Level, 26 N.
17	55	26	"	59	51	20	Altair.	" 30 N.
18	14	56·5	"	39	48	20	A Ursæ Min.	" 44 N.
18	20	13·5	"	38	36	25	B Capricorni.	" "
18	24	45	"	36	09	25	A Capricorni.	" "
19	26	07	"	66	37	55	A Cepheus.	" 24 N, 13 S.
20	12	41·5	"	37	55	05 U L	Jupiter F L.	" "
21	01	20	"	21	00	00	Fomalhaut.	" 26 N, 14 S.
21	05	48	"	11	14	50	A Ursæ Major.	" "

Striding Level, 48 E, 43 W.

Barometer, 28. Thermometer, 74.

Determination of Time, August 21, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitude.			Time, P. M.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.		
3	55	24	56	56	20	12	25	56	Upper.	Barometer, 27·94.
3	58	18·5	56	56	20	12	23	10·5	Lower.	Thermometer, 98.

Transits over the Meridian, August 21, 1855.

FACE WEST.

Time.			Wire.	Altitude.			Object.	C. Level.		REMARKS.
hours	min.	sec.		deg.	min.	sec.		N	S	
19	22	17	Center.	66	39	15	A Cephcus.	9	28	
19	31	26·5	"	45	11	20	B Aquarii.	28		
20	07	36	First.	37	54	10 U L	Jupiter F L.			
20	07	49	Second.	37	54	10				
20	08	01	Center.	37	54	10				
20	08	13	Fourth.	37	54	10				
20	08	35	Fifth.	37	54	10				
20	57	16	Center.	21	01	50	Fomalhaut.	40	13	
21	02	00	"	11	13	25	A Ursæ Majoris.	25		
21	30	04	"	18	45	40	Giausar.	43		
22	47	13·5	First.	40	01	50	Polaris.	49		
22	55	39	Second.	40	03	25	"	50		
23	04	17·5	Center.	40	05	05	"	42		
23	11	50	Fourth.	40	05	05	"	41		True Meridian.
23	19	32·5	Fifth.	40	05	00	"	40		52° 43′ 15″.

Determinntion of Latitude.

Time.			Altitude.			Object.	Center Level.		REMARKS.
hours	min.	sec.	deg.	min.	sec.		N	S	
0	54	09	39	55	05	Polaris.	50		Face East.
1	01	09·5	40	08	55	"		42	" West.

Determination of Latitude, with Altitude and Azimuth Instrument, August 22, 1855.

ALTITUDES OF POLARIS IN THE EAST.

Time.			Altitude.			Center Level.		REMARKS.
hours	min.	sec.	deg.	min.	sec.	N	S	
18	32	28	38	15	00	38		Face East.
18	40	16	39	11	55	18	19	" West.
18	49	04	39	22	10	36		" East.
18	54	41·5	39	18	10	17	20	" West.
19	35	58	39	31	15	17	20	" "
19	46	53	39	41	05	35		" East.

Barometer, 28·02. Thermometer, 74.

Determination of Time, August 23, 1855.

DOUBLE ALTITUDES OF THE SUN WITH BORDER CIRCLE.

Time.			Double Altitude.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	44	15				Upper.	Right and Left Observations.
4	46	05				Lower.	
4	52	00				Upper.	
4	54	49				Lower.	
5	02	04				Upper.	
5	04	57·5				Lower.	
5	08	44·5				Upper.	Barometer, 27·87.
5	11	46	306	40	00	Lower.	Thermometer, 102.

Determination of Time, August 24, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitude.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	51	10	76	57	10	Upper.	
4	54	10	76	57	10	Lower.	
5	02	25	80			Lower.	
5	04	58	82			Upper.	Barometer, 27·75.
5	07	55	82			Lower.	Thermometer, 92.

Determination of Time, August 24, 1855.

EQUAL ALTITUDES OF *a* AQUILÆ, WITH SEXTANT.

Time, E.			Double Altitudes.			Time, W.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.	
16	00	06	104	59	50	19	19	16	By Altitude and Azi-
16	05	09	106	19	50	19	14	19	muth Instrument.
16	09	49	107	32	30	19	09	41	*a* Aquilæ was on the
16	14	58	108	47	00	19	04	23	Meridian at h. m. s.
16	19	18	109	48	00	19	00	08	17 39 45.

Determination of Longitude.

TRANSIT OF THE MOON AND A AQUILÆ.

Time.			Wire.	Altitude.			Object.	REMARKS.
hours	min.	sec.		deg.	min.	sec.		
17	39	21	First.	Lost.			A Aquilæ.	Barometer, 27·66.
17	39	34	Second.	"			"	Thermometer, 80.
17	39	45	Center.	"			"	
17	39	56·5	Fourth.	"			"	
17	40	10	Fifth.	"			"	
18	01	29	First.	24	43	20	Moon F L.	Lower Limb.
18	01	43	Second.	24	43	20	"	Circle Level, 44 N.
18	01	56	Center.	24	43	20	"	Striding Level, 46 W.
18	02	10·5	Fourth.	24	43	20	"	" 43 E.
18	02	25·5	Fifth.	24	43	20	"	

Determination of Time, August 25, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	30	03	68	00	00	Upper.	Barometer, 27·72.
4	32	56	68	00	00	Lower.	Thermometer, 80.
4	34	09	70	12	00	Upper.	Index error — 11′ 44″.
4	37	00	70	12	00	Lower.	
4	40	11	72	28	40	Upper.	
4	42	07	72	28	40	Lower.	
4	45	33·5	74	27	40	Upper.	
4	48	30·5	74	27	40	Lower.	

HAWLEY'S ELKHORN HOUSE.—Camp. No. 1.

Determination of Latitude with Theodolite, August 25, 1855.

ALTITUDE OF POLARIS.

Time.	Altitude.	Azimuth.	REMARKS.
hours min. sec.	deg. min. sec.	deg.	
20 36 58	39 56 00	N 15 W.	Var. Compass, 16° 25′ 52″.

DOUBLE ALTITUDE OF POLARIS WITH SEXTANT.

Time.	Double Altitudes.	REMARKS.
hours min. sec.	deg. min. sec.	
20 50 10	80 13 50	Barometer, 26·78.
20 56 23	80 14 10	Thermometer, 84·3.
21 00 44·5	80 20 30	Index error, 14′.
21 05 39	80 20 45	
21 13 08	80 24 10	

Determination of Time, August 26, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitude.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
6	01	40	100	40	20	Upper.	First set morning.
6	05	01·5	100	40	20	Lower.	
6	10	57·5	103	31	05	Upper.	
6	14	27	103	31	05	Lower.	
10	46	39	89	32	50	"	Second set afternoon.
10	49	40·5	89	32	50	Upper.	
10	52	06·5	87	38	40	Lower.	
10	55	11·5	87	38	40	Upper.	
10	56	44	86	02	00	Lower.	
10	59	45	86	02	00	Upper.	
11	00	50	84	34	20	Lower.	Barometer, 26·75.
11	03	49	84	34	20	Upper.	Thermometer, 89·5.

Determination of Latitude.

DOUBLE ALTITUDES OF POLARIS WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
16	27	51	77	23	10	Index error, 14′.
16	32	27·5	77	27	20	Barometer, 26·86.
16	39	06	77	32	45	Thermometer, 68.
16	43	32·5	77	35	30	
16	46	51·5	77	37	30	
16	50	24·5	77	40	30	

CAMP SPRINGS.—Camp No. 2.

Determination of Latitude, August 27, 1855.

DOUBLE ALTITUDES OF POLARIS IN THE EAST.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec	
19	05	08·5	79	18	20	Index error — 14′.
19	11	33	79	22	40	Barometer, 24·25.
19	16	52	79	24	50	Thermometer, 55.

Determination of Time, August 28, 1855.

DOUBLE ALTITUDES OF THE SUN.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
3	11	08	37	50	20	Upper.	Barometer, 24·18.
3	14	54	38	16	10	Lower.	Thermometer, 76.
3	17	14	40	13	50	Upper.	
3	20	01	40	13	50	Lower.	

TRAGEDY SPRINGS.—Camp No. 3.

Determination of Latitude, August 28, 1855.

DOUBLE ALTITUDES OF POLARIS WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
15	43	36	76	46	50	Index error, 14′.
15	47	00	76	48	40	
15	50	02·5	76	52	10	
15	53	12	76	53	50	
15	55	39	76	55	40	
15	58	29·5	76	57	40	
16	00	59·5	76	59	40	
16	03	28	77	02	00	
16	07	52	77	06	30	Barometer, 22·58.
16	10	55	77	08	05	Thermometer, 46.

Determination of Time, August 29, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
5	19	05·5	85	53	10	Upper.	Index error, 14′.
5	22	12	85	53	10	Lower.	
5	23	59·5	87	34	30	Upper.	
5	27	08	87	34	30	Lower.	
5	29	10	89	21	40	Upper.	
5	32	22	89	21	40	Lower.	
5	34	37	91	15	30	Upper.	Barometer, 22·56.
5	37	55·5	91	15	30	Lower.	Thermometer, 60.

CARSON WEST PASS.—Camp 4.

Determination of Latitude, August 29, 1855.

ALTITUDES OF POLARIS WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
16	29	34·5	77	30	10	Index error — 14′.
16	31	38	77	30	30	Barometer 21·31.
16	34	42	77	31	40	
16	36	49	77	32	10	Thermometer 38.

CLEAR LAKE—Camp No. 5.—Astronomical Station No. 2.

Determination of Latitude with Theodolite, August 30, 1855.

ALTITUDES OF POLARIS IN THE EAST.

Time.			Altitude.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
16	05	06·5	38	29	00	Index error — 1′.
16	11	32	38	31	30	Barometer, 22·63.
16	14	16·5	38	33		Thermometer, 45.
16	19	05	38	35		
16	22	27	38	37		
16	41	30·5	38	43		At Eastern Elongation.

Determination of Latitude.

DOUBLE ALTITUDES OF POLARIS IN THE EAST WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
17	39	57·5	78	29	40	Index error — 14′.
17	46	36·5	78	34	10	
17	50	24	78	35	40	
17	52	51	78	39	10	
17	55	36·5	78	41	10	
17	58	15·5	78	42	50	
18	03	08·5	78	46	30	Barometer, 22·63.
18	06	27·5	78	49	20	Thermometer, 45.

Determination of Time, September 1, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitudes.			Time, P. M.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.		
4	26	19	65	36	00	11	44	32·5	Upper.	
4	29	12	65	36	00	11	41	40	Lower.	
4	32	45·5	68	00	10	11	38	11	Upper.	
4	35	36	68	00	10	11	35	14	Lower.	
4	37	27	69	45	20	11	33	22	Upper.	
4	40	20·5	69	45	20	11	30	22	Lower.	
4	44	55	72	30	00	11	25	53	Upper.	Barometer, 22·62.
4	47	52	72	30	00	11	22	53	Lower.	Thermometer, 68.

Determination of Latitude, with Altitude and Azimuth Instrument, September 1, 1855.

ALTITTDES OF POLARIS AT EASTERN ELONGATION—FACE WEST.

Time.	Altitude.	Circle Level.		Striding Level.		Azimuth.
hours min. sec.	deg. min. sec.	N	S	E	W	deg. min. sec.
16 27 35·5	38 26 30	15	31	48	57	
16 34 37	38 29 40	15	31	48	57	16 27 30
17 07 50·5	38 57 10	23	24	True.	True.	16 27 40
18 03 16	39 16 45	24	25	"	"	
18 13 42	39 22 20	25	24	"	"	Face East.

Thermometer, 35·5. Barometer, 22·71.

Determination of Latitude and Meridian, with Altitude and Azimuth Instrument, September 2, 1855.

ALTITUDES OF POLARIS IN THE EAST.

Time.	Altitude.	Circle Level.		Azimuth.	REMARKS.
hours min. sec.	deg. min. sec.	N	S	deg. min. sec.	
15 52 43	38 29 10	20	25		Face East.
16 00 36	38 32 15	21	25		
16 05 14	38 34 00	20	26		
16 08 31·5	38 35 05	20	26	16 27 50	
16 17 17	38 38 40	20	25	16 27 10	
16 23 44	38 41 05	20	25	16 27 00	At Eastern Elongation.
16 40 38	38 47 50	23	24	16 27 45	Face West.
16 46 20·5	38 50 05	24	23		
16 49 21	38 51 10	24	23		
16 53 16	38 52 45	24	23		
16 56 29	38 54 10	23	24		Barometer, 22·70.
16 59 34	38 55 15	23	24	16 29 10	Thermometer, 43.

Determination of Time, September 3, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitudes.			Time, P. M.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.		
3	37	35	46	20	00	12	32	12	Upper.	Index error.
3	40	18·5	46	20	00	12	29	28·5	Lower.	
3	45	08	49	15	00	12	24	37·5	Upper.	
3	47	56	49	15	00	12	21	46·5	Lower.	
3	52	19	52	00	00	12	17	22	Upper.	
3	55	05	52	00	00	12	14	34	Lower.	
4	00	10	55	00	00	12	09	37·5	Upper.	Barometer, 22·56.
4	02	56·5	55	00	00	12	06	46	Lower.	Thermometer, 64·2.

Transits to Determine True Meridian, September 3, 1855.

Time.			Wire.	Altitude.			C. Level.		Object.	REMARKS.
hours	min.	sec.		deg.	min.	sec.	N	S		
15	26	58	Fourth.	42	07	30	17	27	*s* Ursæ Min.	Approx. Meridian.
15	30	11	Fifth.	42	07	30	17	27	"	18° 19′ 27″.
15	51	54	First.	35	58	38	18	26	Cephei, 51 Hev.	Face West.
15	56	03	Second.	35	58	38	18	26	"	
17	22	40	Center.	39	52	15	9·5	35	*h* Ursæ Min.	
18	04	08	"	16	55	10	25	19	*i* Ursæ Maj.	
18	29	52	"	66	45	15	30	14	*a* Cepheus.	
19	00	20	"	13	20	40	23	21	*y* Grus.	
19	09	07	"	37	12	55	24	21	Jupiter.	F L and U L.
20	04	21	"	20	55	10	20	25	Fomalhaut.	Barometer, 22·55.
20	08	51·5	"	11	15	50	31	14	*a* Ursæ Maj.	Thermometer, 33.

Determination of Time, September 4, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
5	19	49·5	83	09	55	Upper.	Index error +4′ 48″.
5	24	23·5	83	40	10	Lower.	
5	29	30	86	25	30	Upper.	
5	32	49.5	86	25	30	Lower.	
5	34	25	86	58	25	Upper.	
5	38	28	89	21	00	Lower.	
5	41	48	89	21	00	Upper.	
5	44	24	91	13	45	Lower.	
5	47	47·5	91	13	45	Upper.	
5	49	36	91	47	55	Lower.	
5	52	01	93	38	50	Upper.	
5	55	34	93	38	50	Lower.	
5	58	08	95	31	40	Upper.	Barometer, 22·47.
6	03	29·5	96	30	00	Lower.	Thermometer, 62.

Transits over the Meridian, September 5, 1855.

Time.			Altitude.			Circle Level.		Object.	REMARKS.
hours	min.	sec.	deg.	min.	sec.	N	S		
15	32	07	42	08	10	16	31	*s* Ursæ Min.	Instrument readjusted.
17	22	26	39	52	30	13	24	*ℏ* Ursæ Min.	Meridian 18° 32′ 50″.
18	26	06						*a* Cepheus.	Barometer, 22·55.
18	35	02						*B* Aquarii.	Thermometer, 36.
19	04	46	37	09	20	12·5	38	Jupiter.	

CARY'S MILL, CARSON VALLEY.

Determination of Latitude, September 5, 1855.

DOUBLE ALTITUDES OF POLARIS IN THE EAST.

Time.			Double Altitudes.			REMARKS.	
hours	min.	sec.	deg.	min.	sec.		
18	07	59	79	04	10	Chronometer used, Parkinson & Frodsham's,	
18	14	57	79	06	30	No. 1,628; rated to Greenwich Time—slow	
18	19	06	79	08	40	of Dent's, 14′ 45·5″.	
18	22	27	79	12	20		
18	27	12·5	79	15	40	Index error –	– 3′ 40″.
18	31	57	79	19	00	Barometer, 24·40.	
18	35	31·5	79	19	50	Thermometer, 51.	
18	39	00	79	22	40		
18	42	38	79	25	40		
18	46	37·5	79	28	10		

Determination of Time, September 6, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	04	55·5	61	07	05	Upper.	Chronometer used, Parkinson & Frod-
4	07	47·5	61	07	05	Lower.	sham's, No. 1,628.
4	09	08	62	39	10	Upper.	
4	12	00	62	39	10	Lower.	
4	14	39	64	41	00	Upper.	
4	17	31	64	41	00	Lower.	
4	18	54·5	66	14	20	Upper.	
4	21	47·5	66	14	20	Lower.	
4	25	42	68	41	30	Upper.	Barometer, 24·42.
4	28	34·5	68	41	30	Lower.	Thermometer, 56.

MORMON STATION, CARSON VALLEY.

Determination of Latitude, Sept. 6, 1855.

POLARIS IN THE EAST.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
15	54	02·5	77	56	10	
16	00	16	77	58	10	Azimuth of Polaris at Eastern Elongation N, 14 W.
16	04	00	78	05	00	
16	06	27	78	05	30	Time, 16 hrs. 36 min.
16	09	42	78	18	00	Chronometer used—Parkinson & Frodsham's.
16	12	35·5	78	11	20	
16	16	00	78	12	50	
16	19	02	78	14	40	
16	22	28	78	19	10	Barometer, 25·14.
16	25	47	78	22	40	Thermometer, 67·8.

Determination of Time, Sept. 7, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitudes.			Time, P. M.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.		
4	06	07	60	56	40	11	30	26·5	Upper.	Index error.
4	08	58	60	56	40	11	27	35	Lower.	
4	12	19·5	63	12	40	11	24	17·5	Upper.	Chronometer used, Parkinson & Frodsham's.
4	15	09	63	12	40	11	21	34	Lower.	
4	18	35	65	30	50	11	17	59	Upper.	
4	21	30·5	65	30	50	11	15	05·4	Lower.	
4	25	26·4	67	59	50	11	11	08	Upper.	
4	28	24	67	59	50	11	08	15	Lower.	
4	33	46	71	00	00	Lost.			Upper.	
4	36	51	71	00	00	"			Lower.	
4	42	27	74	01	10	10	54	10·5	Upper.	Barometer, 25·04.
4	45	31	74	01	10	10	51	09	Lower.	Thermometer, 78·8.

THORINGTON'S RANCH, CARSON VALLEY.

Determination of Time, Sept. 8, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	25	38	67	49	50	Upper.	Index error.
4	30	49	69	40	20	Lower.	Chronometer, Parkinson & Frodsham's.
4	34	18	69	52	10	Upper.	
4	36	53·5	70	46	50	Lower.	
4	39	30·4	71	41	30	Upper.	
4	42	17	72	40	00	Lower.	
4	45	05	74	40	40	Upper.	
4	48	08	74	40	40	Lower.	
4	51	24	76	53	40	Upper.	Barometer, 24·98.
4	54	26	76	53	40	Lower.	Thermometer, 68.

CLEAR LAKE—Camp No 5.—Astronomical Station No. 2.

Transits over the Meridian, September 9, 1855.

Time.	Wire.	Altitude.	Circle Level.		Striding Level.		Object.
hours min. sec.		deg. min. sec.	N	S	E	W	
15 25 19	Center.	35 58 50	17	27	48 46	52 54 re'd.	Cephei (51 Hev.)
16 35 24	First.	59 46 10	16	29	47	54	Altair.
	Second.	59 46 10			48	53 "	"
16 35 48	Center.	59 46 10					"
16 36 00	Fourth.	59 46 10					"
16 36 12	Fifth.	59 46 10					"
17 01 40	First.	38 17 20	12	33	50	51	*a* Capricorni.
17 02 05	Center.	38 17 20			48	53 "	
17 02 29	Fifth.	38 17 20					
18 06 02·5	First.	66 46 20	7	37	46	54	*a* Cepheus.
18 06 55	Center.				48	52 "	
18 07 43	Fifth.						
18 23 30	First.	33 52 50	11·5	32	48	52	γ Capricornus.
18 23 56	Center.				49	51 "	
18 24 25	Fifth.						
18 30 54	Center.	34 29 55	12	32	48	50·5	*s* Capricornus.
18 31 19	Fifth.				47·5	51·5	
18 42 46	First.	36 57 25	12	32	47	52	Jupiter.
18 43 11	Center.				48	51 re'd.	(preceding limb.)
18 43 35·5	Fifth.						(upper limb.)
19 41 49	Center.		11	34	50·5 47	51.5 55 re'd.	Fomalhaut.

Azimuth of Meridian, 18° 32′ 50″. Instrument set with face West.
Barometer, 22·52. Thermometer, 54.

Determination of Time, September 10, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
5	26	55	82	40	20	Upper.	Index error.
5	34	27·5	85	05	10	"	
5	37	49·5	85	05	10	Lower.	
5	40	29·5	85	54	20	"	
5	53	31	90	57	10	Upper.	
5	57	52	91	07	30	Lower.	
6	04	29·5	94	07	40	Upper.	Barometer, 22·44.
6	08	20	94	07	40	Lower.	Thermometer, 64.

Determination of Time, Sept. 11, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitudes.			Time, P. M.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	hours	min.	sec.	
5	09	49	76	28	00	Lost.			Index error.
5	12	56	76	28	00	"			
5	22	48	80	48	10	10	43	14	
5	26	00·5	80	48	10	10	40	01·5	
5	29	34·5	83	00	00	10	36	28	
5	32	55	83	00	00	10	33	07·5	
5	39	00	86	00	00	Lost.			Barometer, 22·47.
5	42	27	86	00	00	Clouds.			Thermometer, 62.

Transits over the Meridian, August 11, 1855.

Time.	Wire.	Altitude.	Circle Level.		Striding Level.		Object.
hours min. sec.		deg. min. sec.	N	S	E	W	
15 02 19	Center.	42 08 10	15	31	49·5	53	*s* Ursæ Minoris.
		42 08 10			52·5	50 re'd.	
15 09 45·5	First.	35 57 45	21	25	54·5	49·5	Cephei (51 Hev.)
15 17 55	Center.	35 57 45			46·5	57·5 "	
15 26 33	Fifth.	35 57 45					
15 45 28	First.	30 02 50	22	25	47·5	57	*m* Sagittarius.
15 45 54·5	Center.	30 02 50			55	49·5 "	
15 46 20	Fifth.	30 02 50					
16 02 35	First.	54 07 50	18	28	56	49	*s* Aquilæ.
Lost.	Center.	54 07 50			48·5	55·5 "	
16 03 10	Fifth.	54 07 50					
18 22 58	First.	34 30 35	22	27	46	63	*s* Capricornus.
18 23 22·5	Center.	34 30 35			56	53 "	
18 23 47	Fifth.	34 30 35					
18 34 27	First.	36 54 20	20·5	28·5	57	52	Jupiter.
18 34 52	Center.	36 54 20			48·5	60·5 "	(second limb.)
18 35 16·5	Fifth.	36 54 20					(upper limb.)
18 42 08	First.	50 16 30	19·5	29·5	49	59·5	*a* Aquarius.
18 42 33	Center.	50 16 30			56·5	52 "	
18 42 56	Fifth.	50 16 30					

Azimuth of Meridian, 18° 32′ 50″. Instrument set with face East.
Barometer, 22·49. Thermometer, 40.

Determination of Longitude, Sept. 11, 1855.

REAPPEARANCE OF THE FIRST SATELLITE OF JUPITER.

Time.	REMARKS.
hours min. sec.	
16 39 52	Satellite first visible.
16 39 52	" becomes quite distinct.

Determination of Time, September 12, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

FIRST SET—MORNING.

Time.			Altitude.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	11	11	55	06	30	Upper.	
4	14	00	55	06	30	Lower.	
4	16	37·5	57	09	30	Upper.	Equal Altitude, 11° 48′ 46″.
4	20	37	57	32	30	Lower.	
4	23	40·4	58	40	10	"	
4	26	01	59	31	50	"	Equal Altitude, 11° 42′ 17″.
4	28	22	61	24	50	Upper.	
4	31	16·5	61	24	50	Lower.	
4	33	17·5	63	12	00	Upper.	Barometer, 22·51.
4	36	13·5	63	12	00	Lower.	Thermometer, 72.

SECOND SET—AFTERNOON.

10	53	46	76	37	30	Upper.	
10	58	03·5	74	08	10	Lower.	Windy day—clouds.
11	01	05·5	74	08	10	Upper.	
11	03	21·5	72	19	10	Lower.	
11	42	17	59	31	50	Upper.	Barometer, 22·48.
11	48	46	57	09	30	Lower.	Thermometer, 68.

Determination of Longitude, September 12, 1855.

REAPPEARANCE OF THE SECOND AND THIRD SATELLITES OF JUPITER.

Time.			REMARKS.
hours	min.	sec.	
15	04	45	First light of second Satellite of Jupiter.
15	04	50	Satellite distinct.
17	20	00	First light of third Satellite of Jupiter.
17	20	45	Satellite plainly visible.
17	22	17	" bright.
17	22	25	Equally bright as the second.

SOUTH SHORE OF BIGLER LAKE—Camp 6.

Determination of Time, Sept. 15, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	36	13	62	46	50	Upper.	Index error + 6′ 15″.
4	39	16	62	46	50	Lower.	Windy day.
4	42	31	63			Upper.	
4	45	33	65			Lower.	
4	51	05·5	68			Upper.	
4	54	09	68			Lower.	
4	59	51·5	71			Upper.	Barometer, 23·60.
5	02	59	71			Lower.	Thermometer, 60.

BIGLER LAKE—Camp No. 7.—Astronomical Station No. 3.

Determination of Latitude and Meridian, with Altitude and Azimuth Instrument, September 16, 1855.

ALTITTDE AND AZIMUTH OF POLARIS AT EASTERN ELONGATION.

Time.			Altitude.			Azimuth.			Circle Level.		REMARKS.
hours	min.	sec.	deg.	min.	sec.	deg.	min.	sec.	N	S	
15	31	42	39	02	48	32	18	00	22	24	Striding Level true at Eastern Elongation.
15	43	43	39	07	35	32	18	30	23	24	Striding Level. 50 W. 55 E.

Approximate Meridian, 30° 25′ 18″.

Thermometer, 43. Barometer, 23·53.

Determination of Time, Sept. 17, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.	
hours	min.	sec.	deg.	min.	sec.			
4	32	20·5	60	28	10	Upper.	Index error −	− 6′ 15″.
4	35	19	60	28	10	Lower.	Sun in cloud.	
4	43	41	64	28	20	Upper.		
4	46	45	64	28	20	Lower.	Cloud.	
4	48	58	66	18	00	Upper.		
4	52	03·5	66	18	00	Lower.		
4	53	50	67	56	50	Upper.		
4	56	57	67	56	50	Lower.	Wet afternoon.	
4	59	50	69	59	30	Upper.	Barometer, 23·53.	
5	03	00	69	59	30	Lower.	Thermometer, 63.	

Transits over the Meridian, September 18, 1855.

Time.			Wire.	Altitude.			C. Level.		Striding Level.		Object.
hours	min.	sec.		deg.	min.	sec.	N	S	E	W	
17	31	38	First.	67	04	15	16	32	56	53	*a* Cepheus.
17	32	30	Center.	67	04	15			53·5	55 re'd.	Face East.
17	33	19·5	Fifth.	67	04	15					
17	55	34	First.	34	11	35	16·5	32	54	56·5	*s* Capricorni.
17	55	59·5	Center.	34	11	35			57	53·5	
17	56	24	Fifth.	34	11	35					
18	04	19	First.	36	20	35	17	32·5	58	52	Jupiter.
18	04	44	Center.	36	20	35			54·5	56	F L and U L.
18	05	08·5	Fifth.	36	20	35					Face West.
18	14	50	First.	49	56	20	16	32·5	53	57	*a* Aquarius.
18	15	14·5	Center.	49	56	20			58	52	
18	15	38	Fifth.	49	56	20					

Barometer, 23·72. Thermometer, 32.

Determination of Longitude, September 18, 1855.

REAPPEARANCE OF FIRST SATELLITE OF JUPITER.

Time.			REMARKS.
hours	min.	sec.	
18	35	34·5	First light visible.
18	36	03	Fully out.
18	36	21	Bright as other Satellites.

Determination of Time, September 19, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.
hours	min.	sec.	deg.	min.	sec.		
4	20	08	55	18	10	Upper.	Cloudy, with wind.
4	23	10·5	55	18	10	Lower.	
4	27	43·5	58			Upper.	
4	30	44	58			Lower.	
4	36	17	61			Upper.	
4	39	17	61			Lower.	
4	44	53	64			Upper.	
4	47	56	64			Lower.	Clouds.
4	53	43	67			Upper.	Barometer, 23·71.
4	56	49	67			Lower.	Thermometer, 57.

Determination of Longitude, September 19, 1855.

REAPPEARANCE OF THIRD SATELLITE OF JUPITER.

Time.			REMARKS.
hours	min.	sec.	
17	40	25·5	First light appears.
17	40	52	Satellite plainly visible.
17	41	18·5	" as bright as the rest.

Determination of Time, September 20, 1855.

EQUAL ALTITUDES OF THE SUN WITH SEXTANT.

Time, A. M.			Double Altitudes.			Limb.	Time, P. M.		
hours	min.	sec.	deg.	min.	sec.		hours	min.	sec.
4	13	07	52	20		Upper.	11	47	43·5
4	16	03	52	20		Lower.	11	44	42·5
4	20	29	55			Upper.	11	40	16·5
4	23	28	55			Lower.	11	37	21
4	28	55·5	58			Upper.	11	31	57·6
4	31	59·5	58			Lower.	11	28	57·5
4	37	32	61			Upper.	11	23	20·5
4	40	36·5	61			Lower.	11	20	18

Index error $-\frac{1}{+}$ 6′ 20″. Thermometer, 57. Barometer, 23·70.

Determination of Longitude, September 20, 1855.

LUNAR TRANSIT.

Time.			Wire.	Altitude.			Object.	REMARKS.
hours	min.	sec.		deg.	min.	sec.		
14	59	53	Center.				*s* Sagittarii.	Error in Meridian.
15	41	36·5	First.				Moon F L.	Instrument thrown out
15	42	04	Center.				"	of adjustment by a
15	42	33	Fifth.				"	blow.
15	54	31	Center.				*B* Sagittarii.	
16	16	41·5	First.	38	14	05	*a* Capricornus.	
16	17	06	Center.				"	
16	17	31·5	Fifth.				"	Cloudy night.

Determination of Latitude, Sept. 21, 1855.

DOUBLE ALTITUDE OF POLARIS WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.	
hours	min.	sec.	deg.	min.	sec.		
16	12	23·5	78	32	30	Index error −	− 5′ 47″.
Clouds.						Barometer.	
						Thermometer.	

Determination of Time, Sept. 22, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.	
hours	min.	sec.	deg.	min.	sec.			
4	20	00·5	53	59	10	Upper.	Index error, −	− 5′ 47″
4	23	04	53	59	10	Lower.		
4	24	28·5	55	32	10	Upper.		
4	27	32·5	55	32	10	Lower.		
4	28	46·5	57	05	10	Upper.		
4	31	51·5	57	05	10	Lower.		
4	32	43	58	28	00	Upper.	Barometer, 26·63.	
4	35	47·5	58	28	00	Lower.	Thermometer, 59.	

For Index error, Sextant—

Reading off arc.....	37′ 45″	
" on arc...	26 10	
	11 35	
Index error.....	−	− 5 47

MORMON STATION, CARSON VALLEY.

Determination of Latitude, September 22, 1855.

DOUBLE ALTITUDES OF POLARIS WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.	
hours	min.	sec.	deg.	min.	sec.		
15	54	21	78	35	30	Index error −	− 3′.
16	00	25	78	39	10		
16	06	37	78	42	50		
16	10	34·5	78	46	10		
16	14	17·5	78	47	20		
16	20	04	78	53	10		
16	26	59	78	58	30	Barometer, 24·99.	
16	30	30·9	79	01	10	Thermometer, 45.	

Determination of Longitude.

LUNAR OBSERVATION—MOON AND JUPITER.

Time.						OBJECTS.
hours	min.	sec.	deg.	min.	sec.	
16	37	41	05	30	00	Angular distance of Moon's Lower Limb.
16	41	30	59	11	20	Double Altitude " Upper "
16	45	30	68	41	50	" Jupiter.
16	47	59·7	05	26	10	Angular Distance.
16	51	39	69	24	50	Double Altitude of Jupiter.
16	56	07·5	60	42	10	" Moon's Lower Limb.
16	58	54·2	05	22	40	Angular Distance.

Barometer, 24·99. Thermometer, 45.

Determination of Time, Sept. 23, 1855.

DOUBLE ALTITUDES OF THE SUN WITH SEXTANT.

Time.			Double Altitudes.			Limb.	REMARKS.	
hours	min.	sec.	deg.	min.	sec.			
6	43	59·5	95	09	20	Upper.	Index error, –	– 3′.
6	50	01	95	09	20	Lower.		
6	55	36·8	97	07	50	Upper.		
7	02	34·5	97	07	50	Lower.		
7	06	45	98	46	10	Upper.	Barometer, 24·96.	
7	15	19	98	46	10	Lower.	Thermometer, 72.5.	

MOTT'S RANCH, CARSON VALLEY.

Determination of Latitude, September 27, 1855.

DOUBLE ALTITUDES OF POLARIS IN THE EAST WITH SEXTANT.

Time.			Double Altitudes.			REMARKS.
hours	min.	sec.	deg.	min.	sec.	
15	10	57	78	06	40	
15	15	53	78	10	50	Barometer 25.
15	19	10·5	78	11	40	
15	22	30	78	12	50	Thermometer 60.

5. REPORT ON THE CALAVERAS ROUTE.

A TRIP TO CARSON VALLEY.

Murphy's, November 25, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

As any information in relation to a road from Carson Valley to Calaveras County is of especial interest to your readers at this time, I send you herewith an account of the expedition sent out from this place in August last, taken from the notes of our party; which, as it contains some items not contained in the published report, may add somewhat to the knowledge of the route, and keep alive an interest in an enterprise of so much importance to this section of country.

Our party, consisting of Dr. N. C. Congdon, A. H. Hall, J. Thornton, L. W. Noyes, J. S. Niswander and H. Capron, together with a Mexican named Lemon, for packing and taking care of the animals, left the pleasant town of Murphy's at one o'clock in the afternoon of the 8th of August, for a month's sojourn in the mountains. The first fifteen miles, to the world-renowned Big Tree, with its smooth and well beaten track, its excellent timber, and varied and beautiful scenery, are so well and widely known as to need no description in this place. We passed over it in good time, arriving at the Tree at night, where we remained till morning.

Two miles from the Big Tree, in a north-east direction, we crossed one end of a beautiful valley, on which Mr. Woodruff has an excellent and valuable farm, and in which one of the branches of the Calaveras takes its rise. Four miles further on, the Union Water Company have a steam saw mill, for the manufacture of lumber for fluming. At this place the company have taken the water of the main branch of the Stanislaus, in one continuous flume thirteen miles in length, to the branch from which their old ditch conveys it to Murphy's, Douglass' Flat, Vallecito, Angel's Camp, etc., filling the miners' hearts with joy, and their pocket's with gold. The mill is a fine one, capable of the production of one thousand feet of lumber per hour.

Continuing in the same direction four miles further we reached Black Springs; a beautiful cold spring, surrounded with aspens and a plenty of grass for animals, in the immediate vicinity. Here we found gooseberries and raspberries in great abundance. This place seemed to be the limit of oak timber, as we saw none after leaving it. From here our road lay on a divide six miles to Big Meadows, where Smith & Co. are cutting hay. To this place there is a Wagon Road already opened, over which they haul a ton of hay at a load without any difficulty. On the whole route there is plenty of excellent timber, plenty of good grass, and "any quantity" of raspberries, gooseberries, etc. Some of the gooseberries were as large as a pigeon's egg, and of a most excellent flavor, and so abundant that we could have gathered a bushel each in two hours.

Big Meadow is a valley some six or seven miles long, and from half a mile to a mile in width, well covered with various kinds of grasses and clover. It forms the divide between the Stanislaus and Mokelumne rivers, a branch of each rising in it. The meadow is taken up and claimed by Smith and four others, who are cutting grass and hauling hay to the saw-mill and Big Tree, hunting, etc. They furnished us with some venison, grouse, etc.

Pursuing a course north-easterly up the meadow to its head, we crossed a low, thickly timbered spur of the divide between the Stanislaus and the Mokelumne, of easy ascent and descent, and entered a very large valley which, from the signs of bears which we discovered, we called Grizzly Bear Valley. Smith's party killed a couple of grizzlies here while we were gone over. Another branch of the Stanislaus heads in this valley, which, after meandering through the valley, makes its exit through a gorge of rock, or gate, not more than twenty feet in width and forty or fifty high, nearly perpendicular, by damming which, the valley could be be converted into a lake. This valley is nearly round, and some four or five miles across, with grass in great abundance. Passing across about three miles, we ascended another small spur and entered a smaller valley, nearly level with the top of the spur, in the center of which is a small lake. This valley we called Silver Valley, on account of its proximity to the silver mine which had been visited by one of our party on a former occasion, but which proves to be nothing more valuable than plumbago.

From Silver Valley, for a distance of eight miles, it is one continuous meadow, dotted with occasional thickets of timber, mostly aspen, or with islands of rocks, and bountifully supplied with water and a luxuriant growth of grass. Here we found a slate ledge, about thirty feet wide, lying across our path, in a north-west and south-east direction, the only slate we saw on the whole route. In it are traces of copper, iron and silver ore. There is some quartz in this neighborhood. Numerous lakes, abounding with duck, sand-hill crane, etc., may also be found. There are also bears, deer, woodchucks, squirrels, grouse and quails, particularly grouse.

Leaving this meadow and passing through a small belt of woods, we came into the north end of the most beautiful valley we ever beheld. It is about a mile in width and three miles long, lying north and south. The hill on the west side slopes gracefully down to the valley, and is thickly timbered down to the very foot, where it terminates as abruptly, and in as straight a line, as if the valley had been cleared by the hand of man. Nature seems to have taken particular pains to select none but the thriftiest, straightest and tallest of her pines, for the frame of this beautiful picture. The east side is irregular, being made up of capes, or promontories, of granite, interspersed with trees. The entire valley, and even the timbered hill-sides, are thickly covered with excellent grass. A branch of the Stanislaus rises in this valley, and as it is the highest branch we found, we called this Stanislaus Valley.

In and around this valley we found an abundance of whortleberries, service-berries and gooseberries. Taken altogether, this is the pleasantest place in which to spend a few weeks in summer, with which we are acquainted, abounding, as it does, in scenery, seldom, if ever, equaled, in game of various kinds, and a multiplicity of wild fruit.

From Big Meadow to Stanislaus Valley, the road lies on the south side of the dividing ridge between the Stanislaus and the Mokelumne; sometimes at the very base of the mountain, and sometimes at a greater distance; and numerous spurs extend southward from the main ridge, usually terminating in a hill more elevated than the rest of the spur, which is frequently crowned with a conglomerate formation, bearing a striking resemblance to a fort, or embattled castle, or sometimes to an old church-tower.

From Stanislaus Valley we ascended the ridge spoken of above, which is heavily timbered, and on the top of which we found a small lake. Here we are north-east from Murphy's about forty miles; thirty-one of which is a good traveled wagon road, and the remainder will require but little to make it as good as any mountain road in the State.

Descending the divide by an easy grade, we came to the foot of a valley, lying

between two precipitous rocky ridges of great irregularity. The valley is about half a mile wide and three or four miles in length, gradually rising from the foot to the head, to which we gave the name of Pacific Valley. Through it runs a branch of the Mokelumne. Here we first saw Indians, although we had seen their tracks for some days before, and had kept watch all night, fearing our animals might come up missing. Suspecting, from the freshness of their tracks, that we were watched by them, we kept a good look-out, till, finally, a dog, having more courage than his masters, ventured to bark; when, on looking up over our heads, we could see them peering over the rocks in all directions; but as we could not persuade them to come down, we were obliged to leave them.

Following the branch of the Mokelumne half a mile below Pacific Valley, we crossed the stream to the other side, and winding around the base of a mountain of rocks, on a bench nearly level for about a mile, we came to the foot of Mokelumne Valley, which is about two miles long and half a mile wide, and, like Pacific Valley, is surrounded with huge masses of rocks, with the largest branch of the Mokelumne running through it. Plenty of grass. We staid here several days to explore.

Leaving Mokelumne Valley, we start down the branch in a north-west direction, and winding around and gradually ascending a hill, on a bench between the loose granite boulders at an easy grade, we reach the summit in about a mile. Going up a rock heavily timbered with hemlock and balsam, we pass several lakes with plenty of grass, and cross a small ridge into Indian Valley, four miles from Mokelumne Valley. Indian Valley is very large, being some ten miles long by three or four wide. On the east side of this valley commences a ridge, or wall, of conglomerate rock, and running north, forms the comb, or summit, of the Sierra Nevada, rising up perpendicular to the hight of several hundred feet, and assuming all sorts of grotesque and fantastic shapes, resembling pyramids, fortresses, statues, or anything else the fancy of the beholder chooses to imagine.

Here we found Indian tracks in abundance, and heaps of wild onions, which they had been gathering and piling up, but they had run and secreted themselves in the thickets of aspen as we came up. At length, seeing smoke issuing from behind some rocks, we put spurs to our horses, and before they were aware of our presence, we came upon ten or twelve squaws dressed in rabbit skins, roasting onions. Upon seeing us they started up and fled; but we headed them off, and upon giving them to understand that we intended them no harm, one of them went to a point of rock and called to an old Indian, who came up, and on seeing that we were about to cross a marsh, beckoned us to go around. Just as we had passed the marsh, and were approaching some rocks, he whooped twice, when almost instantly out came some fifteen or twenty Indians, armed with bows and arrows, apparently ready for battle. Expecting a combat, we prepared for it, by cocking our rifles and seeing our pistols clear; when, much to our surprise, one of them cried out, "How do you do?" We found them very friendly, many of them speaking tolerable English, or rather Pike County lingo. They were from Carson Valley; where, they said, there were a "heap" of Americans, and "a right smart chance" for a road; from which we inferred that they had been on an emigrant road that led to Pike, if no where else. They said the valley was in sight, and upon ascending to the summit by a trail they had, leading into Little Valley, we found it to be even so, at which we were greatly surprised, as we had always understood that it was at least 140 miles from Murphy's to Carson Valley.

The pass into Little Valley is many hundred feet lower than any other we could find; but it is impracticable for a wagon road, as the descent into Little Valley is so abrupt as to be difficult for a mule. These Indians were a portion of the Washaw tribe. Their captain, or chief, whom they called Pah-sook, was a dignified, intelligent looking old fellow, dressed in a blue flannel shirt, with a white fur

hat, (on which was a black weed), on his head, which reminded us of some of the Broadway swells. He would have done very well, however, as would all of them, had they kept their exceedingly dirty hands out of our grub while we were cooking, a fault to which they were much addicted. They showed us how to make fire with two sticks, which is done by putting the end of a round stick, or reed, into a hollow, in another piece of soft wood, and twirling it between the hands until the friction creates fire. They also showed us a root, resembling a small artichoke, which they use for food, and it is very good, and would be considered a luxury anywhere. Among them we found one of our Cave City Indians, named Santiago, (having written certificates of good character from gentlemen in Cave City), who said he had been several days in the mountains with nothing to eat but berries and grasshoppers, and asked us to let him ride on one of our pack-mules, as he weighed but little, having gone without eating so long;" at the same time placing his hands on the gastronomic region to prove his assertion. As he seemed fatigued, we complied with his request. Santiago, Pah-sook, and his son, Joe, remained with us several days, and until we entered Carson Valley, when we indorsed Santiago's certificate, and he left us.

From Indian Valley we went north, passing through a piece of thick timber, and between Twin Lakes, we entered a small valley, which we called Charity Valley; and passing out at the head, we reached what might be termed the pass, being the highest point on the whole route. This point is about four miles from Indian Valley, and the road rises gradually the whole distance. The timber is almost the only obstacle in the way of its being now a good wagon road. The descent eastward is nearly, or quite, as easy as the western slope, neither one forming any obstacles to the passage of loaded teams.

About a mile east of the pass, rising from the side of a smooth, round mountain, is a mass of conglomerate rock two hundred feet in hight, having the appearance of a monument, which, in honor of our county, we called Calaveras Monument. It is an unmistakable landmark, standing entirely alone, with no other conglomorate rock within three miles.

After leaving the pass, which is about ten miles north from the divide between the Stanislaus and Mokelumne rivers, we came into Faith Valley. This is a most beautiful valley, about one mile wide and five in length, lying nearly east and west, the west end curving a little to the south; very level, and better stocked with grass and clover than any other place we saw. Through it runs a branch of Carson River, branches of which are found in Indian and Charity Valleys. Coming into the west end of this valley we followed it down about a mile, when we passed over a small ridge into Hope Valley, through which runs another branch of Carson River, emptying down the cañon. In the middle of the south end of Hope Valley is a hill which can be passed, with a good road, on either side; and at the foot of the north end of this hill we struck the Old Carson and Hangtown Road, along which are scattered fragments of wagons, carcasses and skeletons of horses, mules, oxen, etc. Hope Valley is about ten miles long and three wide, and is plentifully supplied with grass and water. At the west end commences the cañon famed for its difficulties, disasters and break-downs, in years gone by. Down this cañon there is now a passable road; but a little money, judiciously expended, would make it much better. Passable as it is, however, there is not a foot of the route between it and Murphy's which is not susceptible of being made a better road than that can ever be, and at much less expense; although Mr. Cary, who has a saw-inill at the mouth of the cañon, said that if we could get a road half as good as that, we would have the best road across the mountains.

According to the estimated distances, as given above, the whole distance from Murphy's to Cary's saw mill, is about sixty-five miles, over forty of which, there is now a good traveled wagon road, and fifteen of the remaining twenty-five miles are

through level meadows, where there need be nothing done, leaving only ten miles that will require any expenditure of money or labor.

As we had no barometer, we were unable to ascertain the hight of the pass; but a couple of our party went out on the Hangtown Road to an elevation some hundreds of feet higher than the pass on this route, without attaining the summit. We feel confident, from the easy grade, the abundant supply of grass and water, the great quantity of game, fruit, etc., on this route, that it will prove to be the cheapest, best, pleasantest and most popular route that can be found entering the State from the east, and probably the best, if not the only route, over which a railroad can be built.

Very Respectfully,
Your obedient servant,

O. B. POWERS.

6. REPORT ON THE HENNESS, OR DOWNIEVILLE, ROUTE.

MARYSVILLE, Nov. 10, 1855.

Hon. P. C. RUST:

SIR:

In compliance with your request for information, relative to the degree of practicability and merits of the route known as the Henness, or Downieville, Route, the survey of which I have just completed, I, at present, merely have time to give you a hasty description of the same, together with the results obtained by measurement and observations, in anticipation of a full report, with maps and illustrations, which will necessarily require some time to prepare.

The country examined, was from the Lower Crossing on the Truckee River, thirty-eight miles from the Sink of the Humboldt, to Camptonville, which place is forty miles in a north-easterly direction from Marysville, and connecting with the latter by a well graded road, over which two daily lines of stages pass.

Crossing to the north side of Truckee River, at the Lower Crossing, the route continues up the north side of that stream, in a generally direct and westerly course, for the distance of forty-three miles, to what is known as the Upper Crossing. At this point the river makes a large bend to the south, and it becomes necessary to leave it.

Continuing my westerly course, striking off from the river and crossing a low intervening ridge, a distance of five miles further, brought me to Dog Valley, the waters of which find an outlet into the river. From this point to the Lower Crossing on the North Fork of the Truckee, a distance of eleven and three-quarter miles, the line of survey follows up and down a series of flat ravines, crosses intervening valleys and low divides, with uniform and light grades, rendering but little work necessary to make, over this portion, a road of superior quality, and with but little deflection from a direct line.

From the Lower Crossing of the North Fork of Truckee to the summit of the Sierra Nevada, the course is nearly west; the ascent, uniform and gradual,

being along the valley of the creek, crossing and re-crossing to cut off bends and rising ground, that at points extend to the stream. Thus we arrive, in the distance of seventy-one miles from the Lower Crossing on Big Truckee, at the summit of the mountain, which is only 2,045 feet in altitude above the Upper Crossing on the same stream.

From the summit, the line of survey ascends the western slope of the Sierra Nevada, crossing a mountain *plateau* densely covered with timber, and at the distance of nine miles arrrive at the Lower Crossing of the Middle Yuba River; which point is 1,200 feet below the summit, and traversed for the entire distance by descending grades.

From the Middle Yuba, the line again ascends on to the divide between that and the North Fork of the same stream; from thence descending along the divide to Galloway's Ranch. Here the divide separates, and forms two distinct ridges; the principal ridge extending, by way of Camptonville, to the junction of the two branches of the river, the other extending down and forming a divide between the Middle Yuba and Oregon Creek.

Oregon Creek, forming on the main divide, near Galloway's Ranch, runs in a south-westerly direction, and discharges into the Middle Yuba. The stage road from Forest City and Downieville to Nevada, French Corall, and other points south of the Middle Yuba, traverses down the latter divide.

From Galloway's, my line of survey continues descending, following the ravine, forming the head of Oregon Creek, to Forest City, which place is ninety-seven miles from the point of starting on the Truckee.

Continuing down the creek for about five miles below Forest City, the line then deflects to the north, along a number of small flat benches to the south of the main divide, and again arrives on the divide at Camptonville, one hundred and nine and three-quarter miles from the commencing point at the Lower Crossing on the Truckee, and nearly a due west course from the summit.

I have extended the levels along the entire line, from the Big Meadows on Truckee, twenty-eight miles above the Lower Crossing, to Camptonville, and find it unnecessary for any grades exceeding five degrees to overcome the heaviest ascents, or descents, to be encountered. I have not yet prepared an estimate of the cost for constructing a road, but I do not think it will exceed $50,000; much less would suffice to improve the present road.

I have placed mile posts along the old road from the Desert to Forest City; but the distance will be reduced several miles after calculating angles and offsetts noted.

By a more extended examination on the eastern side of the mountains, which the approaching winter season precluded examining, I have no doubt that twenty or thirty miles more can be saved, and the Desert partially, if not entirely, avoided by striking off from the route examined at Dog Valley, and running from there directly to Pyramid Lake, and thence to the Humboldt.

Having given you a very brief and hasty description of the direction and locality of the route, you will see at a glance, by referring to the State Map, its importance, and the benefits to be derived by the counties adjoining Yuba and Sierra, by the constructing of a great road through them.

Grass and water are abundant along the entire route, excepting from the Middle Yuba to Galloway's; this portion is but sparsely supplied with grass, but good water will be found at several points intervening.

Hoping this hasty description will enable you to form an idea of the route,

I remain, Sir,
Your most obedient,

D. B. SCOTT.

7. REPORT ON THE DOWNIEVILLE AND BECKWITH ROUTE.

Downieville, Dec. 29, 1855.

Dear Sir:

Inclosed you will find a map of the upper part of the County of Sierra. That portion of the map west of Sierra Valley, is a copy of a map drawn by O. S. Dodson, (one of our Deputy County Surveyors,) from actual survey. I will say here, Mr. Dodson is making a complete map of this county, which he will show you in a few days. That portion of the inclosed map from the west side of Sierra Valley to the eastern limits, is drawn by myself on the same scale as the rest of the map (of one inch to the mile). The map commences on the South Fork of the Yuba, about twelve miles above Downieville, showing the line of the proposed road, on the north side of the river, following up the east branch to a pass marked by Dodson on the map, "Chapman's Pass," (which pass is believed to be from 500 to 800 feet lower than the highest point on the proposed ridge route, surveyed by Scott, and marked on this map, having also the advantage of not exceeding more than one and a half miles on the ridge, the rest of the road all lying in the valley.

Last winter I was with Mr. Dodson surveying for a turnpike from Downieville to Foster's Bar. His estimate for said road from here to Foster's Bar, was $47,000, which estimate was intended to be ample. Judging from his estimate and from my own knowledge of road-making, I would estimate as follows:

From Downieville first seven miles, $3,500 per mile, or to one mile above Kanaka Flat	$24,500
Next seven miles, $1,000 per mile	7,000
Next three miles, $2,000 per mile	6,000
Next eight miles, $1,000 per mile	8,000
Next forty-five miles	3,000
For Turnpike Road from Downieville to Foster's Bar	47,000
	$95,500

Thus making from Foster's Bar to the Truckee Meadows, a good turnpike road, according to this estimate, of $95,500, and but one hill between this place and the Truckee Meadows. You will see by the line of road traced on the map, that the road passes through Beckwith's Pass from Sierra Valley, which pass is on a level with Sierra Valley, and a better road now than is found in most of the foot hills near Sacramento Valley. There is seldom any snow in Sierra Valley to prevent traveling. Last winter stock was kept in the valley without feeding. In fact, you may pass by this line of road with not more than five miles of snow, when there are forty miles of snow on the ridge. It is believed by those that have traveled through this pass, to be the easiest one through the Sierra Nevada for a wagon road. I would therefore recommend this pass to your notice, before giving your opinion upon any route. It may cost more than some other route, but I believe it to be better for the State to build a good road at once than to build one

and abandon it in a few years, and build again; and believing this to be the best, I recommend this route to your notice.

Yours, with great respect,

A. P. CHAPMAN,
Downieville.

To the Hon. S. H. MARLETTE, Surveyor-General.

P. S. I should have written sooner, according to agreement, but have been waiting for Dodson to get his map far enough along for me to copy it. C.

APPENDIX B.

1. CIRCULAR TO COUNTY SURVEYORS.

Instructions for the Survey of Swamp and Overflowed Lands.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, Aug. 25, 1855.

SIR:

My "Instructions" of the 13th of last June, which I had the honor to transmit to you, accompanied by "An Act to provide for the sale of the Swamp and Overflowed Lands belonging to this State," seem not to have been fully understood, and my request to acknowledge the receipt of the same having been complied with by but few of the County Surveyors, I am therefore induced to transmit another copy of the same, with such explanations and additions as are deemed necessary:

SURVEYOR-GENERAL'S OFFICE,
Sacramento, June 13, 1855.

SIR:

I herewith transmit a copy of "An Act to provide for the sale of the Swamp and Overflowed Lands belonging to this State," approved April 28, 1855.

You will connect all surveys made under this Act with, and make them a continuation of, the United States' Surveys, until otherwise instructed.

[You are expected to survey the lands into half or quarter sections, except where smaller subdivisions are found necessary, the lines running true North, South, East and West.

The quarter sections are a half mile square, containing one hundred and sixty acres, and the half sections one mile in length by half a mile in breadth.]

If there are cases in your county in which, in your opinion, the value of these lands may be increased by a departure from this system, you will report the same, with the reasons on which your opinion is based, and suggest such modifications as you may consider the best interests of the State demand.

[You are expected to guard the interests of the State in this particular, the purchasers being considered abundantly able to guard theirs.]

I shall as soon as possible, forward to you copies of the United States township plats, on which will be delineated the Swamp and Overflowed Lands, according to the United States Surveys.

[It is scarcely advisable to forward the plats unless there be a probability they will reach you. Of this I can be assured only by an acknowledgment of the receipt of circulars, etc., which many County Surveyors do not trouble themselves to transmit.]

It is believed that *hundreds of thousands*, perhaps *millions of acres* of the best lands in the State, which have been donated to her as swamp and overflowed lands, will be disposed of by the General Government, *unless reliable evidence* shall be obtained, and presented by the State, to prevent the same.

I would respectfully request particular attention to the following remarks of the Commissioner of the General Land Office. He says that "all lands which from being swampy, or subject to overflow," are unfit for cultivation, and "all lands which though dry part of the year, are subject to inundation at the planting, growing, or harvesting season, so as to destroy the crop, and therefore are unfit for cultivation, taking the average season for a reasonable number of years as the rule of determination," are to be considered as granted to the State.

He also says the "United States Surveyor-General is authorized to receive such reliable evidence of the character of any of these lands as may be presented by the authorities of the State; and as many of the lands were surveyed in the dry seasons, and hence are not represented by the descriptive notes or plats as being of that character, I have supposed it a matter of sufficient importance to induce you to call upon the County Surveyors, or other respectable persons of your State, for statements under oath in relation to the swamp or overflowed lands in their respective counties."

He also says: "Such testimony will be considered as establishing the facts in the case," etc.

Section 3d of the Act of September 28th, 1850, requires "That in making out lists or plats of the lands aforesaid, all the legal subdivisions, the greater part of which is wet and unfit for cultivation, shall be included in said lists and plats, but when the greater part of a subdivision is not of that character, the whole of it shall be excluded therefrom."

All the subdivisions upon the township plats are legal.

[The United States Surveyor-General says the "smallest legal subdivision" is "forty acres, or a smaller amount when so returned upon the plat."

I am of opinion that testimony will be required as to the character of each and every quarter section or forty acre lot, and that any such lot is a legal subdivision," (except where a smaller quantity is returned on the U. S. Township plats,) to which the State is entitled when the greater part is wet and unfit for cultivation, or subject to inundation at the planting, growing, or harvesting season, etc., as described above.]

I am anxious to lay before the next Legislature such evidence of the amount and value of these lands which we are in danger of losing by neglect, as will insure the adoption of measures to secure the same to the State. Will you aid me in accomplishing this object? You can do so by sending me an estimate of the amount and value of these lands in your county, not designated as swamp or overflowed upon the township plats, and an estimate of the expense of surveying the true boundary of the same, and obtaining the statements under oath, of yourself and other respectable persons in your county, necessary to establish the facts in the case."

In this way you can do the State great service.

I would earnestly recommend *in all cases* in which you are called upon to survey, under this Act, lands which are *not* designated as swamp or overflowed on the township plats, that, if practicable, you transmit with your field notes and plats, the *statements under oath*, sufficient to establish the fact that the same *are* swamp or overflowed lands.

You will of course bear in mind the full import of the phrase "swamp and overflowed," as explained by the Commissioner of the General Land Office, and by section 3d of the Act of September 28th, 1850, as quoted above.

[I would recommend the following form for your affidavits, where you know the lands to be swamp or overflowed, or subject to overflow:

I, —— ———, County Surveyor of the county of ———, being duly sworn, do depose and say that I am well acquainted with the method of surveying and marking the public lands, and that I have made in my proper person, examination of the lands in the following list, viz: (here give a list of the lands by legal subdivisions surveyed under the Act during the month by you, to the character of which you are willing to make affidavit,) and that from said examination I have discovered, and am well satisfied that every forty-acre lot, or its equivalent legal subdivision embraced in said list, is the greater part swamp or swampy, or subject to inundation at the planting, growing, or harvesting season, so as to endanger, injure or destroy the crops, taking the average season for a reasonable number of years as the rule of determination.

Witness my hand, this —— day of ——, 1855.

Subscribed and sworn to before me, this —— day of ——, 1855.

———— ————

Justice of the Peace.

In case you cannot testify to the character of lands yourself, I would recommend the obtaining of the testimony of the purchaser or other respectable persons, in your county, in which case you can use the above form of affidavit, sufficiently modified to suit circumstances.

I am not authorized to require the above named affidavits, but I request them, *as a means to secure to both State and purchasers their rights.*]

The plats returned to this office will be on the same scale, and similar to those you receive.

You will designate townships, ranges, sections, etc., in the same manner as they are designated by the United States Surveyors.

You will note the variation of the needle, and express your courses from the true meridian.

[You will certify that you have made the surveys in accordance with these instructions, and give the topography of enough of the adjacent lands to enable me to judge of the fact.]

It is made your duty to present to me plans and suggestions for the draining of marshes, prevention of overflows, etc., and you are therefore desired to do the same, and accompany them with an approximate estimate of the expense of constructing the necessary levees and drains.

The Act requires you to transmit to this office plats and field notes within ninety days from the date of your survey, but you are respectfully requested to transmit them monthly.

[You will head your returns, and indorse the same, as follows:

Swamp and Overflowed Lands.

——— County.

Survey No. 1, 2, 3, etc.
Township 1, 2, 3, etc., North or South.
Range 1, 2, 3, etc., East or West.
Section 1, 2, 3, etc.
North, South, East or West half, or N. E., N. W., S. E., or S. W. quarter, etc.
Number of Acres ——.
Surveyed for —— ———, by —— ———,

County Surveyor.

Date.

You will keep these surveys, and return them entirely separate from others, and write on the outside of the envelope, "Swamp and Overflowed Lands."]

Please acknowledge the receipt of this Circular immediately, and send full directions for addressing you. By so doing you will comply with the requirements of both courtesy and duty, and greatly oblige,

Very respectfully your ob't serv't,

S. H. MARLETTE,
Surveyor-General.

To —— ———, Esq.,

County Surveyor, ——— County.

APPENDIX C.

1. SUBSTANCE OF APPOINTMENT AND INSTRUCTIONS UNDER WHICH COUNTY BOUNDARY SURVEYS HAVE USUALLY BEEN MADE.

The County Surveyor of the county whence came the application, has been invariably appointed subject (almost invariably) to the following conditions, viz:

To obtain and forward immediately to this office, the certificate of the Board of Supervisors and of the County Judge, and so far as practicable, of the members of the preceding or of the succeeding Legislature, that they had entire confidence in the competency and reliability of their County Surveyor, and that he would faithfully discharge the duties intrusted to him.

To comply strictly with the Acts concerning the office of Surveyor-General and of County Surveyor, so far as said Acts were applicable to the case, and "if practicable without adding too much to the time and expense of the survey," to "connect by triangulation or by measurement with the United States' Surveys, and with the prominent and well known peaks of the surrounding mountains;" also "to construct as accurate, extensive and complete a map [the scale was designated to secure uniformity] of the surrounding country, as might be found practicable without too great an expense; also to "set *substantial* and *plainly*

visible stakes or *monuments*, properly marked with the *names* of the *counties* and the *distance* from the *initial point*, *every mile*, and *oftener* when *necessary—particularly* at the crossings of roads, trails, streams, ravines, mountains," etc.

To send in with his map and field notes a "written description of the country traversed in making the survey," and his accounts certified to by himself and "approved by the Board of Supervisors, and by the County Judge."

He was informed that as the last Legislature made no appropriation for County Boundary Surveys, he must look to the succeeding Legislature for compensation, and was required, in case the appointment was accepted, to transmit the requisite certificate immediately. In case he declined he was requested to pass the appointment over to the Board of Supervisors, which Board was authorized to substitute some Surveyor who would comply with all the above conditions.

2. REPORT ON SURVEY OF SIERRA COUNTY BOUNDARY.

DOWNIEVILLE,
Sierra Co., Dec. 16, 1855.

SIR:

Having been duly appointed by you, as Deputy Surveyor, for the purpose of establishing the boundaries of Sierra County, I beg leave to submit the following report:

Having, on the 5th of November last, received from the Board of Supervisors of this county, a certified copy of my appointment, and of the instructions accompanying the same; and relying with confidence upon the liberality and generosity of the members of which the ensuing Legislature is to be composed, I at once, with the least possible delay, made all the necessary preparations for complying with the duties assigned me. Accordingly, on the eighth of the same month, having procured a theodolite, together with a surveying compass belonging to myself, employed subordinates, procured mules, collected and arranged camp equipage, provisions, etc., I proceeded to the mouth of the Middle Yuba, where I arrived on the 9th. Took observations for magnetic variation, the result of which, (being 16° 15′ E.,) I assumed as the data by which to commence my survey.

On the 10th I commenced at the center of the Main Yuba, opposite the mouth of the Middle Yuba, and following up the meanderings of the last named stream, ran ten miles, at which point I established a permanent and plainly visible monument.

From this station I proceeded with the survey of the line between Yuba and Sierra Counties, in conformity with the Act approved April 16th, 1852, in a direct line to Cut Eye Foster's Bar, on the North Yuba; thence in a straight line to the Lexington House, situated on the summit of the ridge which divides the waters of the Yuba and Feather Rivers, leaving said house in Yuba County. At both of these points I erected permanent monuments, also at the crossings of all streams, ravines, trails, roads, etc., likewise at short intervals along the entire line, so that it can be traced with facility.

At the Lexington House I took another set of observations for magnetic variation, and the result being the same as that taken previously, was confirmation of its correctness. In consequence of the supposed (and I believe satisfactorily proved) inaccuracy of Eddy's observations for latitude and longitude, and not having in my possession the necessary instruments for determining the same, I found

it absolutely necessary to correct my work with some point, the latitude and longitude of which had been correctly determined; for without this, the eastern boundary of the State, which is the terminus of the line between Sierra and Nevada, could not be established. I therefore ran a random line from the Lexington House to the north-east corner of Township 17 north, range 6 east, of the United States surveys, based upon the meridian and base line of the south peak of Monte Diablo. The length of random line bearing and distance to, and latitude and longitude of, the Lexington House, and other points, I will append in a tabular form.

Having completed the connection line, I returned to the initial point of the line, between Yuba and Sierra Counties, on the Middle Yuba, and ran the line between Sierra and Nevada Counties, (in conformity with chap. 152, sec. 20, of the Compiled Statutes,) up the center of said stream, to the mouth of Wolf Creek, this being the point from which the statute determines the line to run "easterly in a straight line," (which, of course, means due east,) to the eastern boundary of the State. I made my calculations and found the distance to be forty-three miles and fifty one-hundredths. Before proceeding further, however, I ran a random line to Galloway's Ranch, to ascertain how Eddy's observations for latitude and longitude, taken at that place, compared with my work. Having completed the connection, and finding that the difference in latitude was not great, I considered that the survey was correct, although the difference in longitude was very material. I then returned to Wolf Creek; and having taken the necessary observations to determine the true meridian, I produced a line at right angels thereto, to a distance of two miles, when, perceiving that I was beyond the influence of the strong local attraction existing at the mouth of Wolf Creek, and having taken observations for magnetic variations, the result of which was fifteen degrees east, I continued the survey to a short distance beyond Eureka, south; at which point I arrived on the 29th ult.; when, in consequence of a severe fall of snow, rendering it impracticable to proceed across the Sierra Nevada, I was compelled to close the survey for this season. I, therefore, returned to this place on the 30th; since which time to the present date, I have, assisted by Isaac E. James, Esq., Civil Engineer, been constantly employed in the construction of a map of the survey, to which I have added the location of such other points, towns, peaks, streams, roads, etc., as I knew the positions of from actual surveys previously made by me.

The Act defining the northern boundary of Sierra County is so ambiguous that it is next to impossible to ascertain by it the intention of the Legislature. But I have a letter from the Hon. James H. Gardner, (a copy of which I append), in reply to a note that I addressed to him; and he, having been one of the framers of the bill, I am of the opinion that his construction of its meaning and intention is the correct data by which to be governed in surveying this portion of the boundary; for if I survey the line, following out the ridge dividing the waters of the Feather and Yuba Rivers, to its termination, and thence due east to the State line, the eastern part of this county will be a narrow strip of territory, forming a parallelogram some thirty miles in length, from east to west, and not more than eight or ten miles in breadth. It is my intention to reconnoiter this part of the boundary, so as to be able to transmit to your office an outline thereof, before the meeting of the Legislature, in order that, if you think it necessary, you can recommend the passage of a bill defining some certain point from which the line shall run due east.

This, together with my field notes and map, I beg leave, most respectfully, to submit.

I am, Sir, your obed't servant,

WM. G. STILL,
Deputy Surveyor.

Hon. S. H. Marlette, State Surveyor-General,

APPENDIX TO REPORT OF THE SURVEY OF THE BOUNDARIES OF SIERRA CO.

NAMES OF THE SURVEYING PARTY.

J. E. James, Civil Engineer, Assistant; A. G. Havens, R. O. Judd, C. W. Walkins, J. D. Williams, John Jayne, Subordidates.

Table showing Latitude and Longitude established by correction with U. S. Surveys.

Localities.	Latitude.			Longitude.		
	°	′	″	°	′	″
Lexington House	39	40	56·4	121	00	24·3
Mouth of Wolf Creek	39	27	46·4	120	48	03·9
Galloway's Ranch	39	32	14·4	120	48	24·5

Table showing the Actual Distance run with the Compass and Chain, also the Bearings and Length of Corrected Lines.

Points From.	Bearings.	Distance actually run.	Length of correc'd line	Points To.
		Miles.	Miles.	
Mouth of Middle Yuba	Per field notes.	10·00	..	Initial point on Mid. Yuba.
Initial point on Middle Yuba	N 3° 45′ W	8·47	8·47	Cut Eye Foster's Bar.
Cut Eye Foster's Bar	N 7° E	10·50	10·50	Lexington House.
United States Survey	N 27° 11′ 07″ E	33·58	25·75	Lexington House.
Initial point on Middle Yuba	Per notes.	17·19	..	Mouth of Wolf Creek.
Mouth of Wolf Creek	N 3° 22·5′ W	9.43	5·38	Galloway's Ranch.
Mouth of Wolf Creek	E	3·75	3·75	Suspended Survey.
Total distance run, miles		92·92		

Expenditures on the Survey of Boundaries of Sierra County.

W. G. Still's services, one and a half months, at $500	$750 00
Necessary expenses	150 00
J. E. James, forty days	200 00
A. G. Havens, twenty-three days	115 00
R. O. Judd, " "	115 00
C. W. Watkins, " "	115 00
J. D. Williams, " "	115·00
John D. Jayne, " "	115 00
All other expenses	313 60
Total	$1,988 60

Estimated number of miles required to be run to complete the Survey of the entire boundaries of the County—

On the line between Sierra and Nevada	39·76
" " " Plumas	50·00
Total	89·76

Estimated expenses for running the same	$2,000 00
Total appropriation necessary to cover the expense of the surveys made, and estimated cost of completion	3,988 60

Copy of a Letter from the Hon. James H. Gardner.

San Francisco, Nov. 10, 1855.

To G. Still:

Dear Sir:

Your letter of the 7th instant has been received, and in reply thereto, will state that neither McKibben or myself were sufficiently acquainted with the topography of a portion of the county now in dispute, as to enable us safely to make the dividing ridge, or ridges, between the Feather and Yuba Rivers, constitute for their entire length the boundary lines of the two counties.

Our intention was, that the line after leaving the Lexington House should keep the dividing ridge so long as the ridge ran in a northerly direction; where it ceased to do so, there occurred the point of departure for the eastern line.

Hoping that this is sufficient to enable you to determine that point,

I remain, respectfully,
Your obedient servant,

JAS. H. GARDNER.

Description of the Country on the Line of Survey.

The Middle Yuba enters the Main Yuba nearly at right angles to the latter, between almost perpendicular walls of granite. The cañon through which it flows, from this point to Hess' Crossing, is exceedingly steep on either side; the stream frequently passing between perpendicular ledges of rocks, and had not my survey been made at a low stage of water, which permitted me to pass such places by wading up the stream, it would would have been difficult to have performed it.

At Hess' Crossing the slopes are much more gentle, and a good wagon road crosses here, making the descent to the river, down the divide, between Oregon Creek and the Main Yuba. From the mouth of Oregon Creek to Emory's Crossing the slopes are more gentle than from the same point down; but from Emory's to the initial point, the cañon assumes its former character, being steep and almost destitute of timber. From this point, the line between Yuba and Sierra Counties passes, first up a high and steep bank to Spring Valley Ranch, situated on the wagon road from Downieville to Nevada. This ranch contains not more than two or three acres suitable for cultivation, and has a scattered growth of pine and oak from this to Grizzly Creek.

Between Grizzly and Oregon Creeks is a narrow ridge; and about one-fourth of a mile to the east, Kentucky Hill Diggings are situated. These are surface diggings, and are reported to be very rich. The miners have built quite a town, composed of log cabins.

Oregon Creek, at the point crossed, forms a very deep cañon, with precipitous and rocky bluffs on either side. On the north bank I found large quantities of natural magnet, or loadstone. From this the line passes over a series of small, sandy ridges and ravines, covered with a sparse growth of scrub oak and pine, until it arrives at Oak Valley. This is a rich mining locality, situated at the head of a branch of Willow Creek, and one mile south of Cut Eye Foster's Bar. The entire ridge for several miles below and above this place, so far as prospected, has proved to be a valuable mining region; but the entire absence of water, for mining purposes, is the cause of a greater portion of it not being worked. The North Yuba, at the point crossed, has been tolerably well "panned out." Immediately below the line, a small wooden toll-bridge spans the river, connecting the trail from Oak Valley with the Eureka Trail. Cherokee Creek, an inconsiderable stream, empties into the Yuba immediately below the bridge, whose sources are small springs on the divide between the North Yuba and Cañon Creek, about three and a half miles from its mouth. Grizzly Hill, on its east bank, and Brandy City, upon the ridge between this and Cañon Creek, are extensive mining districts. At Brandy City they are erecting quite a number of neat wooden tenements. The streets are laid out in regular order, and there is every reason to suppose that it will, in a short time, become a flourishing mining town.

The next point is Cañon Creek, correctly named, for we had to send our pack mules some fifteen miles off our course to find a crossing. The banks of this stream rise at an angle of forty or forty-five degrees, to the hight of over 1,000 feet from the bed of the creek; and in some places the stream runs between perpendicular bluffs, several hundred feet in hight. We next came to Rock Creek, a small stream that empties into the last named creek a short distance west of the county line. Between this and Cañon Creek, one-fourth of a mile to the east of the line, is Council Hill; and about one mile and a half north-east, on the same ridge, is Scale's Diggings, both extensive mining localities.

From this to Slate Creek, the country is broken and rugged, interspersed with ravines and occasional patches of fertile soil. Rose Valley Ranch and Gold Val- Valley Ranch, are small and fertile. At the head of a small stream, running through the latter place, is Poverty Hill, a new and apparently flourishing little town.

We next cross Slate Creek, having high banks, covered with a thick undergrowth of stunted shrubbery. Upon the north side we crossed a ditch which brings water from Feather River to Barnard's Diggings. These diggings are extensive, and are said to yield well; they are situated about two miles east of the line. From this to the Lexington House is one complete dense mass of chaparral, which we found particularly destructive to our "unmentionables."

The character of the country, from the initial point on the Middle Yuba to the mouth of Wolf Creek, is very much the same as that given of the same stream below.

Respectfully, yours,

W. G. STILL.

To the Hon. S. H. Marlette, Surveyor-General.

APPENDIX D.

CIRCULAR TO, AND REPORTS FROM, COUNTY SURVEYORS.

CIRCULAR TO COUNTY SURVEYORS.

SURVEYOR-GENERAL'S OFFICE,
Sacramento, July 16, 1855.

SIR:

I respectfully call your attention to the following extracts from the laws defining the duties of your office, in connection with that of the Surveyor-General:

First. From "An Act concerning the office of Surveyor-General, passed April 17, 1850."

"SEC. 9. He shall deliver to the Governor, annually, on or before the fifteenth of December, his Report, which shall contain:

1. An accurate statement of the progress he may have made in the execution of the surveys enjoined on him by law, and in the preparation of the map of the State.

2. Plans and suggestions for the improvement of the internal navigation of the State, and for the construction and improvement of roads, turnpikes, railroads, canals and aqueducts; also, plans and suggestions for the planting, preservation, and increase of forests of timber trees, for the draining of marshes, prevention of overflows, and the irrigation of arable lands, by means of reservoirs, canals, artesian wells, or otherwise.

3. An estimate of the aggregate duantity of land belonging to the State, and the best information he may be able to obtain as to the characteristics of the same.

4. An estimate of the aggregate quantity of all lands used for, or adapted to, tillage and grazing within this State, and each county of the State, together with a description of the locations in which the same may be situated.

5. An estimate of the aggregate number of horses, cattle, sheep and swine within the State, and each county of the State.

6. An estimate of the aggregate quantity of wheat, rye, maize, potatoes, grapes, and other agricultural productions of the preceding year, together with his views as to the presence, cause and remedy of any diseases, or other mischief, preventing a full and proportionate return and increase of the same.

7. An estimate of all mineral lands within the State, and each county of the State, and the quantity and value of each mineral produced during the preceding year, together with a description of the localities in which such minerals may be found.

8. All facts which may be within his personal knowledge, or which he may learn from reliable sources, and which may, in his opinion, be calculated to promote the full development of the resources of the State.

SEC. 10. He shall address a circular letter to the County Surveyors and County Assessors, instructing them, and it is hereby made a part of their official duties, to use their utmost diligence in collecting information, relative to each and every matter mentioned in the ninth section of this Act, and to transmit to him,

quarterly, at the seat of Government, a report in writing, setting forth the result of their inquiries.

SEC. 11. He shall with his annual report, transmit to the Governor, all reports which he may have received from his deputies as mentioned in the tenth section of this Act."

Particular attention is requested to the second sub-section.

A careful examination of the sixth and eighth sub-sections will satisfy you that I am authorized and required to call upon you to "use your utmost diligence in collecting information relative to each and every matter mentioned" below, as I consider the same as "calculated to promote the full development of the resources of the State."

Lands—Agricultural, mineral, swamp, overflowed, subject to overflow, adapted to tillage, grazing lands.

Timber—Oak, pine, redwood, etc.

Acres and bushels of wheat, barley, rye, oats, Indian corn, buckwheat, peas, beans, Irish potatoes, sweet potatoes, turnips, beets, parsnips, carrots, onions, clover, and other grass seeds, flax seed, etc. Melons, cabbage, pumpkins, etc.

Acres and tuns, or pounds of hay, flax, hemp, sugar, rice, tobacco, cotton, etc.

Pounds of wool, beeswax, honey, butter, cheese, value of eggs, etc.

Fruit Trees—Apple, peach, pear, plum, cherry, etc. · Number and age, acres, amount of fruit.

Vineyards—Vines, grapes, and wine.

Live Stock—Horses, mules, asses. Neat Cattle—Oxen, milch cows, calves, etc. Sheep, goats, swine, etc. Value of animals slaughtered, value of poultry, etc.

Internal Improvements—Canals, turnpikes, railroads, electro-magnetic telegraphs, etc.; length, original cost, cost of repairs, income, profits, etc. Incorporated bridge companies, toll bridges, ferries, etc.; amount of stock or cost, income, etc. Artesian wells; number, depth, cost, discharge, kind and thickness of strata bored through, etc.

Steam and other Grist and Saw Mills; kind and amount of grain ground, run of stone, amount of flour, meal, etc.; kind, amount, cost and value of lumber; original cost, expense of running, profits, etc.

Quartz Mills and Mines; cost, value, etc.; tuns of quartz crushed, cost and yield per tun.

Manufactures.

Any Meteorological Tables or Observations—In short, all important facts you may be able to obtain, will be very acceptable.

Please state the number of miles of boundary of your county, necessary to be surveyed prior to January 1st, 1857, and the probable expense of the same.

I will be obliged to you for any suggestions for the improvement of the boundaries of your county, by substituting natural for artificial [arbitrary] ones, or the lines of the United States surveys for the present lines, or any other changes with a view to a better and more permanent subdivision of the State.

Second. From "An Act prescribing the duties and fixing the compensation of County Surveyors," passed April 9th, 1850.

"SEC. 13. Each County Surveyor, immediately after making any survey, except surveys of city or town lots, shall make out a copy of the field notes and plats, and transmit the same to the Surveyor-General, indicating plainly upon the plats, at what point of any line, any river, or stream, or any county line is touched or crossed.

When called upon so to do, he shall communicate to the Surveyor-General such information concerning surveys made by him, and other matters connected with the duties of his office, as may be required."

Under this Act you will perceive that it is your duty to furnish to this office "a

copy of the field notes and plats" of all roads surveyed by you, and it is certainly very desirable that the Act should be complied with in this particular.

I respectfully request that you will examine carefully the Act concerning Roads and Highways, passed by the last Legislature, and present any suggestions for its improvement you may deem of importance. Should not the property tax be larger? I send you a copy of my Annual Report, and would call your attention to, and ask any suggestions for, the improvement of my proposed road system.

Third. From "An Act to provide for a map of the State of California."

"Sec. 3. County Surveyors are hereby required to connect all surveys made by them in their respective counties, with, and to some known points, to be determined astronomically, or by connection with the United States Surveys, whenever practicable, under the direction of the Surveyor-General, and report the same to the Surveyor-General, in accordance with the provisions of the 'Act prescribing the duties of County Surveyors, passed April 9th, 1850.'"

Fourth. From "An Act to provide for the disposal of the five hundred thousand acres of land granted to this State by Act of Congress," passed May 3, 1852.

"Sec. 12. The County Surveyors of the respective counties of this State, at the end of every three months from the taking effect of this Act, shall make out, and forward to the office of the Surveyor-General of the State, without fee for the same, a duplicate copy of each plat, or survey and certificate of the location of any land warrant made under the provisions of this Act, in their respective counties; and for a failure so to do, shall be liable to a fine of not less than five hundred nor more than five thousand dollars, recoverable before any court of competent jurisdiction, on the complaint of any person or persons in interest."

The following extract and circular will be useful to you not only in locating School Land Warrants, but in selecting the balance of the five hundred thousand acres granted to this State.

[*Extract from a Communication from the Commissioner of the General Land Office, dated November* 16, 1853.]

"The eighth section of the Act of 4th of Sept., 1841, making the grant of 500,000 acres to the States for Internal Improvements, requires that the selections shall be made in such manner as their respective Legislatures shall direct; to be located, however, 'in parcels, conformably to sectional divisions and subdivisions of not less than three hundred and twenty acres in any one location,' 'at any time after the lands of the United States, in said States respectively, shall have been surveyed according to existing laws.' Inclosed I send you a copy of the Circular of Instructions from this office, issued under this Act, and dated the 6th of August, 1847; by a careful adherence to the requirements of which, much future embarrassment may be obviated. The fifth section of this Circular requires 'that the selecting agent should file in your office an authenticated copy of his letter of appointment, or other satisfactory evidence of his authority.' You will, therefore, carefully observe that each of these State Warrants bears upon its face evidence of the authority of the party by whom the application for location may be presented, to select lands for the State under the eighth section of the Act of 4th September, 1841.

The date when these warrants are filed in your office, and the simultaneous application to enter, becomes the date of the selection by the State; it follows, therefore, that no one one hundred and sixty warrant can be located, as the law requires the selections to be made in parcels of not less than three hundred and twenty acres. Two or more one hundred and sixty warrants, however, though in

different hands, may be located at the same time upon contiguous lands. By this, I mean at the same instant of time. Thus, two or more warrantees may make conjoint application to enter a body of land equal to the value of their warrants; but a holder of one one hundred and sixty acre warrant cannot at a later period, even of the same day, locate a tract, though it may be contiguous to land previously selected.

Accompanying this, I send you a form of a list to be used by you in reporting these selections to this office for approval. You will send up these lists, accompanied by the warrants of the State, upon each of which the locator must indorse his application to select, which application will supersede the necessity for their signing the printed form at the bottom of the list. When these lists have been examined at this office, such of the selections embraced thereby as are valid, will be certified to the State. This office does not recognize the warrants or their assigns in any other light than as the agents of the State, and no patents will be issued to them.

You will be pleased to caution the locators against selecting any swamp or overflowed lands, as all such will be certified to the State, under the Act of 28th September, 1850. I am, Sir,

Very respectfully, your obédient servant,

JOHN WILSON, Commissioner.

Wm. W. Gift, Register of the Land Office, Benicia, California."

[*Circular to the United States Registers.*]

"General Land Ofeice,
Nov. 16, 1853.

Wm. W. Gift, Register of the Land Office, Benicia:

Sir:

Herewith you will receive a copy of the eighth section of the Act of the 4th September, 1841, entitled 'An Act to appropriate the proceeds of the sales of the public lands, and to grant pre-emption rights.'

In order to facilitate the business of State selections under this Act, I have to draw your attention to the following:

1st. The whole area to which the State of ——— is entitled under this law is ——— acres.

2d. The Act requires the selections to be 'in parcels, conformably to sectional divisions and subdivisions of not less than three hundred and twenty acres in any one location,' etc.

Under this requirement a selection may include a whole section or a fractional section; or an island containing three hundred and twenty acres, more or less; *provided*, the State, where the quantity is less than the prescribed number of acres, will agree to accept the same for, and in lieu of, a tract containing the full quantity of three hundred and twenty acres, but not otherwise.

Or it may embrace—

The east, west, north, or south half of a section, or two adjoining quarters of different sections, or any number, even of the smallest legal subdivisions of differ-

ent sections; *provided*, the tracts selected adjoin each other, and form compact parcels, containing together not less than three hundred and twenty acres.

3d. The selections must be based upon the official township plats of the public surveys, which are required to be approved by the Surveyor-General, and on file in the local Land Office, at the time of filing the selection.

4th. The law allows selections to be made upon public lands, whether offered or unoffered. But no State selection is admissible upon any land to which a pre-emption, or other valid claim shall be legally established, nor on any land which 'is, or may be reserved from sale by any law of Congress or proclamation of the President of the United States,' nor upon any tract which is reserved or withdrawn from market for any purpose whatever.

5th. The selecting agent of the State should file in your office an authenticated copy of his letter of appointment, or other satisfactory evidence of his authority; and it is important and necessary that he should make such careful and thorough preliminary examination as will enable him to select lands to which there may exist no valid claim by pre-emption or otherwise, and to avoid the embarrassments and delays consequent upon such conflicts, you will also examine the plats, records and papers in your office, before the lists of lands so selected are filed, and see that such selections are in all respects free from such objections.

6th. If, notwithstanding such precaution, the State shall hereafter select lands which shall be found to be interfered with by any prior and better claim or claims, the selection to the whole extent of such claim or claims, will of course be null and void; and if such valid claim or claims shall only extend to a part of the selection, by the rejection of which, the remaining portion or portions shall be reduced to one or more detached bodies below the quantity of three hundred and twenty acres, the part or parts not interfered with, may nevertheless be confirmed; *provided*, the State will accept each detached parcel which may thus be reduced to less than three hundred and twenty acres, as equivalent to, and in lieu of the full quantity of three hundred and twenty acres; otherwise, such parts or parcels will be rejected, on the ground of the land not forming the compact parcel required by law.

7th. That the action of this office may be uniform, it is hereby determined, from the date of this circular, that when selections are reported to this office, which are found to conflict with the declaratory statements of pre-emptors, the approval of that part of the selection thus covered by such statement, together with such portion as may not be interfered with, but which would be less than three hundred and twenty acres, if the part covered by the declaration should be confi med to the claimant, will be suspended, to await the final result of the pre-emption claims, which if not established at the expiration of the period allowed by law, the selection of the State will then be approved.

8th. Should a tract of land be selected by the State, and rejected on the ground of not forming the compact parcel required by law, it is no bar to its being re-selected, provided other land, not interfered with, is selected in connection with it, so far as to form the compact parcel of three hundred and twenty acres, or more, as the case may be. Should such re-selections be made, they are required to be embraced in an entire new list, bearing the number of the series at the time of such re-selection.

Herewith you will receive the form of a list to be used for selections: This form requires the date to be given when the list is filed in your office, such date being regarded as the date of the selection, so that in the event of a pre-emption or other conflict, the question as to priority of right may be properly settled. The lists should bear a regular series of numbers from No. 1, and should be signed by the agent. If the list is regular and complete you will enter up your selections on your books, and mark them on the plats, sign the official certificate

as to the correctness of the list of selections, and transmit the same to this office, in order that it may be submitted to the Secretary of the Treasury for his approval.

The law of Congress allows no commissions on this business.

You are requested to acknowledge the receipt of this circular, which is designed to embrace all the material principles in previous circulars in reference to this subject, and to be your rule of action in relation to this business in future.

Very respectfully,
Your obedient servant,

JOHN WILSON,
Commissioner."

Your last report for this year should reach me by the first of November next, that I may avail myself of its contents in making out mine, which must be transmitted by the 15th of December.

I would respectfully urge upon you a careful examination of this circular, and a strict compliance with its requirements.

Please write upon but one side of the paper.

Please acknowledge the receipt of this circular immediately, as a neglect to answer, heretofore, has occasioned considerable extra labor in this office.

You will confer a favor by giving full directions for addressing you, as in some cases three months elapse before I receive answers to my communications, and then only after several have been sent.

Have you received my "Instructions" for the survey of the Swamp and Overflowed Lands?

I am, very respectfully,
Your obedient servant,

S. H. MARLETTE,
Surveyor-General.

REPORTS FROM COUNTY SURVEYORS.

COUNTY SURVEYOR'S OFFICE,
Alameda, Nov. 3, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

The Assessor, from the nature of his duties, is evidently better able than the Surveyor, to furnish most of the information required by your circular; and so fully has the Assessor of this county complied with its requirements, in his report for this year, that it leaves but little for me to say.

LANDS.

With the exception of a small portion of the San Joaquin Plains, all the valley land in this county is claimed under Mexican grants. It will be impossible to

tell how much of the San Joaquin Valley is embraced within this county, until the eastern boundary is established. There are many thousand acres of good mountain land, upon which School Land Warrants could be safely located, were it sectionized by the United States. Most persons are unwilling to make locations of warrants until surveys are made.

OVERFLOWED LANDS.

There are no lands subject to overflow from fresh water. There is a strip of marsh bordering upon the Bay of San Francisco, which in some places is six or seven miles in width.

This is covered by salt water only at extreme high tides; a portion of it will in time be valuable. I have made the following surveys of this description of land:

One hundred and sixty acres, fronting upon the towns of Clinton and San Antonio, for James B. Lane.

One hundred and sixty acres, fronting upon the town of Encinal, for James F. Hibberd.

Five hundred and seventy-two and three-fifths acres, near the southern boundary of the county, for Theo. H. Scribner.

One hundred and sixty acres, near Union City, for A. H. Myers.

All the overflowed land bordering upon the estuary of San Antonio, including the tracts surveyed for Larue and Hibberd, is claimed by parties holding under a a grant from the State to the City of Oakland.

MARSH LANDS.

Many claims upon this marsh land have been "taken up," but nor surveyed, especially about the different landings, of which there are nine or ten. None of the above surveys were made with reference to United States township lines. The first three were made before the passage of the law relating to overflowed lands.

To carry out your instructions and make the locations correspond with the lines of the United States surveys, would require, in many instances, the running of six or eight miles merely to get a starting point. Parties desiring to purchase small tracts would object to paying for the survey of more than their purchase.

I think it would be but proper for the State to divide these lands in sections of a mile square. The lesser subdivisions would then be made at the expense of the parties purchasing. The cost to the State I think would not exceed six cents per acre.

COUNTY BOUNDARIES.

I should like to call your attention particularly to the subject of our county boundaries.

At present the description is so indefinite that it would be almost impossible to run them except by agreement. They are thus described in the statutes organizing the county:

"Beginning at a point at the head of a slough, which is an arm of the Bay of San Francisco, making into the main land in front of the Ygara Ranches; thence to a lone sycamore tree that stands in a ravine between the dwellings of Fluhencia and Valentine Ygara; thence up said ravine to the top of the mountains; thence on a direct line eastwardly to the junction of the San Joaquin and Tuol-

umne Counties; from thence north-westwardly on the west line of San Joaquin County to the slough known as the "Percadero;" thence westwardly in a straight line until it strikes the dividing ridge in the direction of the house of Joel Harlan, in Amador Valley; thence westwardly along the middle of said ridge, crossing the gulch one-half mile below Prince's Mill; thence to, and running upon, the dividing ridge between the Red Woods, known as the San Antonio, or Prince's, Woods; thence along the top of said ridge to the head of the gulch, or creek, that divides the ranches of the Peralta's from those known as the San Pablo Ranches; thence down the middle of said gulch to its mouth; from thence westwardly to the eastern line of the County of San Francisco; thence along said last mentioned line to the place of beginning."

The starting point is indefinite. There are many sloughs in front of the Heguera Ranches.

I believe the course common to San Joaquin and Tuolumne has never been established.

From the Percadero "westwardly in a straight line until it strikes the dividing ridge in the direction of the house of Joel Harlan," is well enough; "thence westwardly along the middle of said ridge, crossing the gulch one-half mile below Prince's Mill. The main ridge, at the nearest point, is four or five miles east of the mill, which is in a cañon that runs parallel with the ridge (at what point shall we leave the ridge to cross the cañon?) Again; "along the east line of San Francisco County to place of beginning."

The east boundary of San Francisco County is the middle of ship channel, and our starting point on the shore of the east side of the bay.

I think that some action should be taken in this matter as soon as possible, and the boundary established.

MAP.

In my last report I made a proposition in regard to furnishing a correct map of the county. As you have not replied to it, I suppose that it would be useless to make another in this.

The only toll bridge in this county connects the town of Clinton with Oakland.

Several artesian wells have been bored to the depth of two hundred and fifty, or three hundred, feet; but with the exception of one at Thompson's Landing, no large supply of water has been obtained. The one at the landing is one hundred feet deep, and gives a fine stream.

SCHOOL LAND WARRANTS.

I subjoin a list of School Land Warrants located since the organization of the county. Duplicate copies of plats and field notes were forwarded to your office at the completion of each survey.

School Land Warrants Nos. 666 and 671, for one hundred and sixty acres each, located by James F. Hibberd, September 27, 1853.

School Land Warrants Nos. 593 and 919, for one hundred and sixty acres each, located by J. W. Dougherty, September 29, 1854.

School Land Warrant No. 71, for three hundred and twenty acres, located by James Redmond, October 14, 1854.

School Land Warrants Nos. 746 and 776, for one hundred and sixty acres each, located by William O'Connell, September 11, 1854.

Very Respectfully, your obedient servant,

H. A. HIGLEY.
Surveyor Alameda County.

Bidwell, November 12, 1855.

Hon. S. H. Marlette, State Surveyor-General:

Sir:

I have the honor to submit the folllowing report, made in conformity with the statute and your circular to County Surveyors:

LANDS.

As nearly as I can ascertain from such data as I possess, about three-fifths of this county is mineral land. Throughout the mountain regions, however, there are numerous valleys, some of considerable extent, which are being rapidly settled upon, and many farms are already in an advanced state of cultivation.

SWAMP AND OVERFLOWED LANDS.

I cannot even approximate to the amount of "swamp and overflowed lands" within this county. I have not received the township plats made by the United States Surveyors; and, consequently, do not know what they have returned as "swamp and overflowed lands." From the fact, however, that their surveys were made in the dry season, and from information derived from what I consider a reliable source, I am satisfied that there are several thousand acres in the county which are clearly "swamp and overflowed lands," as defined by the Commissioner of the General Land Office, which have not been returned as such as by the United States Surveyors. I can give no positive, or satisfactory, information on this point, however, until I receive the plats.

From published extracts from the report of the Assessor of Yuba County, for this year, it appears that he claims the North instead of the South Fork of the Honcut, as the boundary between this and Yuba County. This is manifestly erroneous, as by reference to the statute defining the boundaries of Yuba, it will be seen that the northern boundary line follows the dividing ridge between the Feather and Yuba Rivers "to the source of the Honcut; thence down the Honcut, etc." Now, the South Fork is the only one which has "its source" in, or can be reached by following down said ridge, the North Fork having its source north of said ridge, near Forbestown. This opinion of the Assessor of Yuba, however, has already given rise to disputes and litigation along the boundary; and will, no doubt, cause trouble at the next general assessment, unless the question is definitely settled. For these, and other plain reasons, unnecessary to mention, it is desirable that said line should be marked out as soon as practicable; and our Board of Supervisors have directed me to request you to make said survey as soon as you can conveniently do so.

The boundary line between this and Sutter County runs from a point on the bank of Feather River, opposite the mouth of Honcut Creek, in a direct line to the most northern point of the three Buttes, and thence due west to the Sacramento River. There is a large amount of real and personal property situated in the vicinity of this line, and heretofore Assessors and the property owners have been at a loss to determine in which county the property should be taxed; besides, a considerable amount of property has heretofore escaped taxation altogether, the

owners claiming to belong to, and in some instances, (it is supposed), pretending to have been assessed in the adjoining county, when called upon by the Assessor or Collector of either. To remedy this, I was directed by our Board of Supervisors to run and mark out said line, which I did last August, and herewith transmit to you a copy of the field notes and plat of the same. The special purpose for which this survey was made did not admit of our waiting for the co-operation of Sutter County in making this survey; consequently, unless said line, as run by me, be accepted and adopted by that county, it ought to be surveyed by you, or under your direction, without delay.

ROAD RETURNS AND COUNTY MAP.

I sent you, some weeks since, the field notes and plats* of surveys of roads, made by me in this county. Since that time I have been engaged, when business would admit of it, in platting all the different roads upon the same sheet, and connecting them with each other, and with the United States Surveys, and with points in the county whose latitudes and longitudes have been accurately determined. Two or three short lines remain to be run, which I expect to do in a short time, to form a complete connection, which, when done, will enable me to make a tolerably complete and accurate skeleton map of the county. I will send you a copy of the same as soon as completed.

ROAD SYSTEM.

In your circular you call my attention to your "proposed road system as set forth in your last annual report." I have no "suggestions to make for its improvement," but fully approve of the same, and would be pleased to see it adopted.

The recommendation that "none but Civil Engineers be eligible to the office of County Surveyors," I particularly approve of.

A leveling instrument is more particularly necessary in the mountain regions, and I have several times been compelled, in order to select the best route, to use my theodolite, at my own expense and loss of time, no provision being made by law for payment of such services.

I have no statistical information to communicate beyond what is contained in the report of the Assessor for this county, which you have already received.

The short time that I have been in office must serve as my apology for not furnishing a more complete and satisfactory report.

Respectfully submitted,

J. W. SCOTT,
Surveyor Butte County.

* The plats are not yet received. S. H. M.

Colusi, Sept. 29, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

Your circular of July 16th, 1855, is before me, and in answer thereto I beg leave to report:

1st. By order of the Board of Supervisors I run the boundary line between this and Yolo Counties, from the Sacramento River, ten miles below the head of the Sycamore Slough, some distance into the low hills of the Coast Range, a distance of ——— miles and ——— chains, and here the chaparral or brushwood became so dense that I could not proceed without great expense to the State. The Board directed me to go as far as any settlement would probably be made, which was done. See map herewith. See, also, field notes and plats of four roads.

2d. A large body of land in this county could be drained and made valuable for grazing, and even for agriculture. A ditch should be cut from the most westerly bend of the Sycamore Slough (see map) in a north-westerly direction, into the marsh, which has an area of about thirty-six square miles, and can not empty itself into the slough, because the annual deposit has been greater immediately upon the banks. This ditch should be about six feet deep at the slough and half a mile long, but very rapidly losing its depth as it approaches the tule or marsh. The slough from this point should be cleared of all brush and other impediments to the end of its present channel, a short distance below the county line. From the end of the upper channel to the upper end of the lower channel, I am informed, is not more than two miles; thence to Knight's Landing the channel is nearly on a level with low water in the river. The ditch to connect the upper and lower channel would be entirely in Yolo County. Should the State adopt the policy of giving the several counties the whole or a part of the swamp lands, in consideration of the drainage of them, it would seem to be highly proper that the boundary of Colusa County should be so changed as to give this county the control of the overflowing water from its departure from the river to its entrance into it again. I would, therefore, suggest that the County of Colusi be bounded as follows: Beginning at the mouth of Sycamore Slough, thence up said slough to some township or section line which would include the Buckeye Ranch, thence west to the top of the Coast Range, thence northerly along said summit to the source of Stony Creek, including Clear Lake and all the settlements thereon, thence down Stony Creek to the Sacramento River, thence across said river and down a large slough, which heads nearly opposite the mouth of said creek, to Butte Creek, thence down said creek along its principal channel to its junction with Butte Slough, thence down said slough to some township or section line which would include Eddy's Ferry, thence west to the Sacramento River, thence down the river to the beginning. A new county might be formed of the upper end of this county, with a part of Shasta and Butte. The Buckeye Ranch is about twenty-four miles below Colusi (town) and about eight miles below the county line. Stony Creek is about forty miles above. The eastern boundary would be the center of the swamp—impassable in winter.

3d. This county is about ninty-four miles north and south, and about forty-five miles east and west—4,230 square miles. The dry land which is good for cultivation, is a strip along the river about four miles wide, the whole length of the county, say four by ninty-four miles, and a strip along the base of the Coast Range from the lower end of the county to Stony Creek, about fifty miles, eight

miles wide, in all equal to seven hundred and seventy-six square miles. A strip of overflowed lands extends from Stony Creek down, about six miles wide—three hundred square miles. I am not aware of any minerals in this county.

4th. Answered.

5th. The Assessor will report.

6th. " " "

7th. Answered.

8th. The immediate settlement of the land titles.

I am not aware of any law especially requiring the survey of counties prior to January, 1857. The cost of surveying the southern, western and northern boundaries of this county could not be less than $25,000.

The suggestions I have to make on the Road Law of 1855 is, that the first Section is entirely wrong. The third Section should require the *Clerk* to make out the order on appointment and the *Sheriff notify*. In the sixth Section the junior age should be sixteen years, instead of twenty-one, and the property tax is altogether too high; but if the people do not rebel against the State tax they may not against this. The words "poll tax" should be substituted for "road tax." In the eighth Section the fifty dollars contracts should be made without waiting for the approval of the Board.

After the ninth Section another section should follow, providing for the writ of *ad quod damnum*, so that the Act shall not violate the last clause of Section eight of the Bill of Rights. It seems to me that the Road Overseers ought only to report once a year, say at the November meeting, and that delinquents ought to be sued before a Justice of the Peace and a Constable collect the tax. In the thirteenth Section the suit ought to be instituted by the Road Overseer or any other person.

Your Annual Report has not been received at this office.

Your instructions for the survey of swamp lands, of June 13th, 1855, and also your circular of August 25th, 1855, have been received; but I have not been called upon to make any surveys under the Act of April 28th, 1855, so that I cannot give any more accurate information than the general statement made in the fore part of this report.

It occurs to me that it would be to the interest of the State to make an appropriation to employ the County Surveyors of some of the valley counties to select at once all the swamp lands in their counties, by running a zig-zag line along the edge of the swamps, and to draw maps, in which shall be shown each legal sub-division which is overflown. To do this honestly and faithfully the Surveyor ought to be paid something more than the legal fees, as it would be necessary that he should call upon the persons living in the vicinity and take their affidavits as to the places overflown, as the appearance of the grass, weeds, etc., is not always an infalible test.

There is a very large body of swamp land in this county, according to its present limits, but there would be a large quantity added by the alteration in the boundary as suggested above.

All of which is respectfully submitted.

C. D. SEMPLE,
Surveyor Colusi County.

* County Surveyor's Office,
Contra Costa County.

Hon. S. H. Marlette, Surveyor-General State of California:

Sir:

In reply to your circular under date of November 15, 1854, allow me, as regards Article first, to say, I have but recently entered upon the [duties of this] office, from the resignation of T. M. Aull, Esq., and am not prepared to report.

Article 2. As regards the streams navigable in this county, the Monte Diablo Creek is of the most note. It pursues a winding course through tule and marsh land; upon its branches are two or three embarcaderos, the Monte Diablo Lime Co. using one, and the farmers the other. There is a large warehouse built, and more grain has been shipped at this point than from the wharf in Martinez. The stream is navigable for river craft, say forty tons, for some three miles. San Pablo Creek also admits vessels of fifteen tons, and is rendered equally useful to the farmers in that vicinity. We have good county roads connecting Martinez, the county seat, with San Pablo, the Red Woods, Oakland and San José. There has been, and is still much oak cut on land, the title to which is in litigation in many instances. The black locust and cotton-wood trees have a faster growth than any other yet introduced.

Article 3. An estimate of the land belonging to the State in this county at present, it would be impossible to make. In fact, the confirmation of Spanish grants in this county has covered the majority of arable lands.

Article 4. The estimate of tillable land in this county would reach perhaps 150,000 acres; and as regards grazing, with few exceptions, our hills furnish good cattle ranges seven months out of the year.

Article 5. The number of horses may be set down at 16,000, of cattle at 25,000, of sheep 95,000, and swine 9,000.

Article 6. The wheat raised the past season may be estimated at 200,000 bushels. No attempts have yet been made to raise rye. The crop of maize has been, as a general thing, a failure the past season. A species of worm and an insect have destroyed whole fields, attacking the grain after its formation. Little attention has been paid to potatoes, the crop may be set down at 50,000 bushels. There have been some seventy-five tons of grapes raised this season, from old vineyards. In other sections of our county the vine has been stripped of its foliage, while the melon, squash and cucumber have been literally destroyed. Wood ashes have been used to no purpose; pulverized charcoal has been suggested, and in the New England States horse manure is placed in a cask, and covered with lye water, the water then drawn off, and the plants watered with the drainage.

Article 7. Relative to minerals upon Mount Diablo; quartz has been formed, and in a lime-rock quarry at the same place, small specimens of marble, closely resembling the white marble of Pennsylvania, have been formed. The overflowed lands are estimated at 150,000 acres.

In conclusion, I would say in regard to this meager report, that I have but lately assumed the duties of the office of County Surveyor, and have surveyed but little, and unfortunately your circular, from a change in the post office department, came to hand too late for a timely report.

DANIEL SMALL,
Surveyor Contra Costa County.

* For 1854.

Los Angeles, Oct. 13, 1855.

Dear Sir:

Your annual circular for 1855 came duly to hand. I have to answer, that I have not received your instructions for the survey of the swamp and overflowed lands.

Until the litigation instituted by the United States Government against land owners shall be abated, and stability imparted to the character of titles to real estate in this county, so as to warrant purchases and settlements, there is no necessity for either a survey or change of county boundaries; they are for the most part natural, and have been designated so as to suit the convenience of tax payers. I have understood that the authorities of Tulare County have claimed that the Rancho Tejon was embraced within the limits of Tulare County, but such a claim must be absurd, and entirely without foundation, for the language of the statute is sufficiently explicit on that point; besides, the owners of said rancho live in Los Angeles and San Diego, the natural and adopted marts of the settlers of that rancho, as also the valley of Tehachpie, situated to the north-east of said rancho, is Los Angeles.

Concerning the infinity of information, otherwise suggested by statute and requested by you, I regret to inform you that it has not been the province of my duties, or within my sphere of action as County Surveyor, to learn anything other than that I have had occasion to survey the vineyard of Don Luis Vignes, now owned by Mr. Lansevane, containing some 30,000 vines, and a variety of fruit trees, such as orange, fig, peach, etc., etc., together with some other smaller ones, all situated within the corporate limits of the City of Los Angeles.

Respectfully yours,

HENRY HANCOCK,
Surveyor Los Angeles County.

To S. H. Marlette, Esq., Surveyor-General.

San Rafael, Marin Co., Nov. 10, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with your circular of July 16, I send you the following report of this county:

This county is supposed to contain about seven hundred square miles, and is bounded by natural boundaries with the exception of the distance from the Estaro Americano to St. Antonio Creek; that portion of it is bounded by a road which is about twelve miles in length. I am unable to furnish you with a map of this county without a survey of the county lines; this I am unable to do at

my own expense. About two-thirds of this county is suitable for cultivation and grazing. There has not been any School Land Warrants located in this county the past year, or any swamp, or overflowed, lands belonging to the State. There is but little swamp land in this county; there are some thousands of acres of salt marsh in the north-eastern part of the county on the margin of creeks and of the bays; this is supposed to belong to the State, but to reclaim them it would cost more than the land is worth. These lands have been surveyed by the United States. The principal timber in this county consists of redwood, pine and oak; there are some four thousand acres of land covered with redwood timber. Most of this land is supposed to belong to the United States; and is situated near Tamel Pisc Mountain and about Daniel's Creek, in the township of Bolinas. There are four steam saw-mills in this county; three of them are in Bolinas, where the greater portion of lumber is sawed and shipped from.

There is a large bay in Bolinas, where vessels of a light draft of water, say six to seven feet, can come in and be safe from all winds. This place is in the southern part of the county, and is not laid down on the State map, although this bay is about three miles in width and three and a half in length. There have been no public improvements made in this county since it has had the name of a county, although there are $15,000 raised in taxes yearly. No roads made, or bridges built. In the winter season the roads, if you can call them by that name, are dangerous both to man and beast, to travel, on account of the many arroyas which run across the road; all these places could be made passable, by bridging, at a very small expense. The county is now about $5,000 in debt, and is unable to do anything towards improvements. Some part of this county has been townshipped, but no part of it sectionized.

I would estimate the number of

Horses	3,000
Cattle	8,000
Sheep	4,000

Fruit trees, 2,500, from three to four years old; the most of them are apple and pear trees. This year they have borne about ten bushels of the very best quality of apples and pears. The wheat crops have all been destroyed by rust and smut. Barley has done very well; the number of bushels I am unable to state. Vegetables are cultivated to a considerable extent, sufficient for domestic consumption. There have been three roads surveyed in this county, the field notes and plats I have sent to your office.

I have received your Annual Report, and have also examined your proposed road system, and think it ought to be adopted.

Very Respectfully,
Your obedient servant,

ALFRED D. EASKOOT,
Surveyor Marin County.

MERCED RIVER, Nov. 1, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

According to instructions received by me from you, requesting information, I beg leave to submit the following:

Merced County is an agricultural and grazing county, there being very little mining land in the county. The surface is generally level, with very little timber, which is principally oak and willow. Of the amount of swamp and overflowed lands I have no means of estimating. The crops in this county have been very light this season, owing to the want of rain. A large portion of wheat was injured by smut, which will cause many to abandon its culture. There is no fruit raised in this county; there is no use of planting fruit trees, or any other trees, unless the land is irrigated; the grasshoppers would destoy them. They do very little damage on land that is well irrigated.

The line between Merced and Mariposa Counties, I think is not satisfactory to both parties, it being the main road leading to the San Joaquin River, which is very crooked, and changes, perhaps, every three months. I would suggest a line to commence at the south-west corner of Tuolumne and the south-east corner of Stanislaus Counties, running in a straight line to Phillips' Ferry, on the Merced River; from thence in a straight line to Convers' Ferry, on the San Joaquin River; from thence south in a straight line to the line of Tulare County. This line would run diagonally across the lines of the United States surveys for the greater portion of the way. I have not made any surveys yet.

Respectfully, your ob't serv't,

ERASTUS KELSEY,
Surveyor Merced County.

COUNTY SURVEYOR'S OFFICE,
Nevada County and City, Oct. 29, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

Agreeably to instructions received per circular in August last, I beg leave to submit the following report of Nevada County:

The agricultural land is by no means extensive, for it is at present confined to the valleys and ravines alone; in time, when canals shall traverse our highest hill-tops, the coarser grains may be raised in great profusion. There are no swamp or overflowed lands in the county. Tillage and grazing land is abundant, but it requires artificial means to make them profitable, (irrigation.) The staple of the county is mineral, and, I may add, timber, of which I will speak in their proper places.

The quantity of land claimed as pre-emptions, and surveyed, amounts to about 30,000 acres. There is no possibility of my getting at the quantity claimed by parties who have had no survey made; and there are many such, who say the law does not compel them to get their land surveyed by a County Surveyor; so they pace round their pre-emptions themselves, get them recorded, and feel secure in their titles. You see, sir, how impossible it is for me to come at anything like a correct estimate of the quantity of land claimed by actual settlers, or the number of acres under cultivation.

TIMBER.

Pine, oak, with some spruce and cedar. The pine is the most abundant and profitable.

The number of acres under cultivation may possibly reach 4,300, of which there are of

	Acres.
Wheat	1,100
Barley	1,500
Oats	350
Corn	50
Hay	700
Potatoes	300
Other vegetables	300

Of flax there is none, nor hemp, neither sugar, rice, cotton or tobacco.

Fruit trees, particularly the peach, will flourish in this county, but as yet none have been brought to perfection.

	No.
Horses and mules	1,500
Cattle	2,300
Swine	7,800

INTERNAL IMPROVEMENTS.

We have somewhere in the vicinity of seven hundred miles of ditches for supplying the mines with water, and now being constructed; valuation of those in operation, $350,000. The price of water as sold to the miners will average fifty cents per inch.

ROADS.

There have been surveys made of roads in the county, by my predecessor, but in the absence of field notes or maps of the same in my office, I am unable to say anything on the subject.

There are no railroads in the county.

There is one electro magnetic telegraph, terminating at this place, which not unfrequently notifies us of the arrival of the mail steamer before she reaches her wharf in San Francisco. I am informed the line is being extended to Downieville, in Sierra County; its length will then be through the entire county of Nevada, from south to north. As yet it has declared but small dividends.

There are eight toll bridges in the county.

The number of ferries I am unable to state with accuracy; they are mostly

being done away with, and substantial bridges constructed in their stead. Those already passable are valued (as per information from an efficient Assessor) at $26,300.

The number of quartz mills in successful operation. are sixteen, five of which are run by water. The quantity of ore crushed per annum, 75,000 tons; average yield per ton, twenty-five dollars; cost of quarrying, hauling and crushing per ton, fifteen dollars; aggregate value of machinery, $300,000.

The total amount of original investments in quartz, is estimeted at $2,000,000. This amount will be doubled in a few years, for it is proved beyond dispute, that our quartz veins are not only remunerative, but inexhaustable. At the very lowest calculation I put the annual yield of gold in the county at $5,000,000.

We have lime rock too, which is pronounced superior to any in the State, and in great abundance.

There are in successful operation thirty-two saw mills in the county, with an average cutting of 1,000,000 feet of lumber annually; valued at thirty dollars per thousand, and the number of mills increasing monthly. About two-thirds of the entire county is one vast forest of pine, spruce, oak and cedar.

There is one grist mill with a capital of $25,000, and turning out 5,000 barrels of superior flour per annum, valued at $60,000, and grinding also some twenty tons of barley per month.

I have not kept, neither have I seen, a meteorological diary of the weather, but I have seen the mercury at one hundred and eight in the shade; and again, ten degrees below zero. In the hottest of our weather I have experienced no great inconvenience, even in the field, the air is too pure for fatality.

Upon entering the duties of my office in May last, I was somewhat surprised to find we were without a map of the county, neither a field note of any kind excepting pre-emption claims; the Clerk's office is without a county map. As near as I can learn, the county lines are thus: Commencing at the Yuba River, mouth of Deer Creek, and running south to Bear River, (which line my predecessor tells me was run by himself and the Surveyor of Yuba County,) which is the only line run; thence up Bear River (natural boundary between Nevada and Placer counties) to its source. Commencing again at the mouth of Deer Creek and running up the Main Yuba to the mouth of the Middle Yuba, thence up Middle Yuba to the mouth of Wolf Creek, thence from the mouth of Wolf Creek due east to the State line. Now, if I am correctly informed, and from personal observation I think I am, I most respectfully suggest that the last named line may be so altered as to read thus: "Thence up the Middle Yuba to the mouth of the North Fork of the Middle Yuba, thence up said North Fork of Middle Yuba to its source, thence north-east to the State line."

I have two reasons for this change; the first is, that a due east course from the mouth of Wolf Creek to the State line, will place Eureka in Sierra County, to which fair play, and the people themselves, object; for in the winter season it will be impossible for them to get to their county seat, (Downieville,) when Nevada can be reached at all times. And again, a due east course from the mouth of Wolf Creek, I am inclined to think, will intersect with Placer County before reaching the State line, on the summit of the Sierra Nevada; in the second place, by making the North Fork of the Middle Yuba to its source the line between Nevada and Sierra Counties, and thence north-east to the summit or State line, we will not only have what I think just and right, but will secure to us what we have always called our own—"Eureka." The north-east line will not require to be run at present, for it is far beyond the inhabited part of the State.

I would recommend that a survey be made of the entire county, and a topographical map drawn of the same, which I should think might be done accurately

for $2,000. As I am now I can hardly say where Nevada County is, and am still more in the dark as to the whereabouts of the township lines.

If not out of place, I will here say that an Immigrant Road, of which so much has been said and written, might through this county find an easy grade, either to Carson Valley, or to the valley through the summit, in which the Middle Branch of Feather River springs. I am of opinion that a reconnaissance for a road, either from Bear Valley or from Eureka, would meet with success. In the spring of 1850 I was in the valley referred to as crossing the summit, and if I mistake not, it now goes by the name of the American Valley. It comes into the Truckee Immigrant Road not far from the Donner Cabin, east of the summit. From explorations since the spring of 1850, I am pretty well convinced of the success of a reconnaissance for a road to that point.

Yours respectfully,

JOHN DAY,
Surveyor Nevada County.

Quincy, August 2, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

Your circular of June 13th, published in the *Daily Democratic State Journal*, and sent me through that medium, was duly received. In compliance with its requirements, I have briefly to state, that it is not in my power to give you any reliable information concerning the swamp and overflowed lands of this county. The United States surveys have not been extended to this county. The country is mountainous, and interspersed with valleys, but few of which, owing to the prevalence of frost during the summer, are adapted to agricultural purposes; of these, the American and Indian Valleys may be considered as the principal ones. To these my official labors have been almost exclusively confined. The former contains about five thousand acres, the latter near twenty thousand acres of land, the whole claimed and occupied by actual settlers. A considerable portion of these valleys might be called swamp lands. Much of this land has already been reclaimed by the owners, and I think the remaining portions of it will be in a few years.

A few School Land Warrants have been located in both American and Indian Valleys. Owing to the existence of gold in almost every place here, in the valleys as well as the hills, it is my opinion that all the land will be regarded by the United States authorities as mineral land, and that the General Government will not cause it to be surveyed. Indeed, as permanent, and in many instances very costly and valuable improvements have been made by the occupants of it, any interference with their lines as at present established, would be productive of much evil. I would suggest that the State take some measures to secure these lands to itself, and that each and every person occupying or claiming land, and producing satisfactory evidence of the amount so claimed, by paying the State a

fair equivalent therefor, have a patent issued to him for it. By this means the State would secure to itself at least $25,000, and probably much more.

Most respectfully yours,

H. CHURCH,
Surveyor, Plumas County.

County Surveyor's Office,
San Bernardino, October 10, 1855.

To S. H. Marlette, Surveyor-General:

Sir:

Having received your circular to County Surveyors, I hasten to acknowledge the receipt of it, and report to you such information in my possession, and such improvements as I think would be of great benefit to this county and the State.

The County Assessor having received a circular similar to mine, and being possessed of all statistical information of the county, and having forwarded the same to you, I did not think it necessary to prepare a similar report, as our facilities for obtaining information respecting the items mentioned in your circular are very limited, and indeed the most of them are totally impracticable.

In the first place, I would respectfully urge for your consideration, the improvement of the road through the Cajon Pass, which road leads to Great Salt Lake City. By getting a good road through this pass, it would materially advance the interests of this place, as well as a great many others. The length of road necessary to be made, would amount to about twelve miles, and the probable cost from $7,000 to $10,000.

In the next place, I would suggest the boring of artesian wells on the road to Great Salt Lake City, there being a number of deserts to cross over, and not one drop of water for fifty or sixty miles at a drive. I, having travelled the road, am aware of the suffering and hardships of travelers for want of water on the road. I think that water may be obtained within two hundred feet at the utmost extent, and the number necessary would probably amount to five within the boundaries of this State.

Herewith you will please receive a copy of a plat and certificate of land surveyed by me, and filed in the office of the County Clerk of San Bernardino County.

I am, very respectfully,
Your obedient servant,

ARVIN M. STODDARD,
Surveyor San Bernardino County.

County Surveyor's Office,
San Diego, Sept. 10, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

I have the honor herewith to transmit to you all the information relative to the County of San Diego which at present I am enabled to furnish. Such details as are not within my personal knowledge, are derived from authentic sources. No report from this county has, I believe, from any County Surveyor, ever been forwarded to you or your predecessors in office. Until the receipt of your circular of the 16th of July of the present year, no communication from your office has reached me during the two years that I have been honored with the responsibilities of the position of County Surveyor. The following statement of the boundaries, topographical features, improvements and resources of this county, is respectfully presented to your notice.

COUNTY BOUNDARIES.

The boundaries of the County of San Diego are thus defined by law:

"Commencing on the coast of the Pacific, at San Mateo Point, and running thence in a direction so as to include the ranchos of Santa Margarita and Lajuna Ternacala (?), to the rancho of San Jacinto, and along its northern line to the north-east corner, and from thence in a parallel line with the southern boundary with Mexico, to the Colorado River; thence down the middle of the channel of said river, to its junction with the boundary line of Mexico; thence following the boundary line to the Pacific Ocean, and three miles therein; thence in a north-westerly direction, running parallel with the coast, to three miles due west from San Mateo Point; thence east, to the place of beginning."

San Mateo Point is a few miles south of the creek of San Juan Capistrano, and is the northernmost of two small projections of land, at the mouth of the Creek of San Mateo. From that point to the north-east corner of San Jacinto, along what is described as the Lajuna Ternacala, which I suppose to mean the Laguna Temecula, the line is difficult to be defined, either upon the ground owing to want of exactness in ranch boundaries, or upon a map in the absence of correct surveys.

The remainder of the northern line of the county is readily located on a map, but impossible to be traced throughout its extent upon the ground. Probably not more than two points of the line are accessible between San Jacinto and the Colorado River. These are the points at which it crosses the valley of the San Gorgonio Pass and the supposed valley of the Mohave River. This river, it is now believed, from the reports of Lieut's Parke and Williamson, does not reach the Colorado, nor cross the line of this county, but sinks in a sandy basin in a direction north-east of San Bernardino. There is no doubt, however, that a large valley makes up from the Colorado, towards the Mohave country, and its trend is nearly in the direction given on the maps to the River Mohave. From the intersection of the northern boundary with the Colorado River, the middle of that stream is the boundary, until the Mexican boundary is reached. This I think is not accurately laid down upon the maps.

The junction of the middle of the channel of the Colorado with the Mexican boundary line is not now, as formerly, at the mouth of the Gila River. The

shifting of the sandy channel of the Colorado considerably to the westward, has left the former initial point of the treaty boundary, nearly a quarter of a mile up the Gila River, and consequently the junction of the former river with that boundary is something like seven miles down the Colorado, at the place where the line crosses that river, and enters upon the desert. This change in the topography I apprehend does not affect the question of the county or State boundary, though the matter has been the subject of some discussion by persons interested in claims at that place. It has been alleged that the territory on the south, or Sonora side of the river, does not now belong to the State of California, but to the territory known as the "New Purchase," inasmuch as the channel intersects the Mexican boundary at but one point, and that is where the latter leaves the river at Pilot Knob, seven miles from the mouth of the Gila. In my surveys at that point I have considered the old boundary throughout as the proper one, and the plats of the surveys heretofore transmitted to you will be found to correspond thereto.

From the mouth of the Gila to the Pacific Ocean, the line is direct to the monument at the initial point, a distance of about one hundred and thirty-five miles, the course being (by Emory) south 85° 34′ 16·18″ west. This boundary has, of course, been accurately run and marked, by the U. S. Commissioners, throughout its whole extent, and a portion on the desert for sixty miles west of the river, has been run and marked by my myself, the boundary monuments being planted at every mile and half mile, under the orders of the U. S. Surveyor-General, in connection with township surveys in the same region.

The coast line, as laid down on the charts of the coast survey, has been copied on the official map of the State, and with the exception of the part to be referred to in a succeeding paragraph, is undoubtedly accurate.

AREA.

No estimate of the amount of territory embraced within the boundaries of this county, as defined by the Statute, can be made with accuracy; from the fact that no surveys hitherto executed have laid down the county boundary correctly. The River Colorado, which forms the eastern boundary of the county and State, is not accurately put down on the maps, nor the resulting position of the intersection of the northern boundary of the county with that river. The coast line of the Pacific, there is reason to believe, is also improperly placed on all the maps: the error, I think, originating with the reconnaissance of the Coast Survey, from which all recent maps have been constructed. On comparison with the U. S. Land Surveys, it appears to be too far to the eastward by about two miles as a maximum, at a point some twenty-five miles north of this place, the difference decreasing in both directions therefrom, until the true longitude is again finally attained.

From the recent surveys in the vicinity of the Colorado River under the orders of the U. S. Surveyor-General, it is definitely ascertained that the general course of that stream is nearly south, from a point at least thirty miles north of its junction with the Gila. This shows an error in most of the maps up to the present time, and diminishes the apparent area of the State in a very considerable degree.

The patriotic regret that our domain is not as extensive as has been supposed, is somewhat alleviated by the consoling reflection that the entire territory in that section is worth rather less than nothing; nor can a State be said to be exactly impoverished by being deprived of that which she never owned.

San Diego County is traversed from N. W. to S. E. by the mountains known

popularly as the Coast Range, but more appropriately designated the California Cordilleras. This range occupies with its spurs and foot-hills and narrow intermediate valleys, about one-third of the entire county area, and contains all the agricultural land of the district, as well as a fair proportion of thickly timbered country adjacent to the sources of the San Diego River and other small streams running parallel to it. Spurs and ridges from the western slope of the mountains on the west, terminate on the coast and give a broken and rugged character to the surface; relieved, however, by the small valleys of the different streams, which are occupied as ranchos, and when cultivated are highly productive.

From the eastern slope of the mountains to the Colorado River, is the flat and sandy wilderness called the Colorado Desert. The portion of the desert embraced in this county, consists of a belt of arid level clay and sand, one hundred miles in width, extending entirely across it from north to south. The amount of desert land may be roughly estimated at 5,000 square miles.

Toward the northern limit of the county the mountain-ranges from the west and north, extend their barren ridges quite to the Colorado River, and apparently inclose the principal plain of the desert.

The area in this county of these mountains, which are volcanic in their origin and rocky in character, is nearly 5,500 square miles.

Approximately, the whole area of the county may be estimated at probably not less than 14,000 square miles.

SURVEYS IN SAN DIEGO COUNTY.

Since the establishment of the San Bernardino Meridian, from the initial point on that mountain to the southern boundary of the State, in 1853, the United States surveys of the public lands in this county have progressed with great regularity and expedition. From that meridian, which traverses the heart of the agricultural region of the county, the surveys of the standard parallels east and west, have been conducted, to their intersection with the coast, and also, with the exception of one, the second from the initial point, to the eastern boundary of the State.

These surveys have assisted greatly in giving us a better knowledge of the topography of this part of the State, and when the township surveys shall have been completed, a map of tolerable accuracy may be constructed, embracing much information of value to the geographer. By the lapse of another year there will probably have been obtained sufficient material in connection with local surveys, to furnish what has long been needed—a complete county map with topography placed upon it with some degree of accuracy.

The survey of the mouth of San Diego River, by Lieut. Derby, United States Topographical Engineers, in connection with that of the bay, by the Coast Survey, both of which are published with the Congressional documents, gives a reliable map of these localities; and the unpublished maps of the Boundary Commission must doubtless contain valuable information. The map of Emory's Route in 1846-7, which has been often used as authority in delineating the country between the Colorado River and San Diego, I cannot recommend as entirely faultless; the existence of some of the topographical features whereof it being my duty to utterly deny. The positions of some of the prominent places near the coast are, however, accurately given on the map; and wherever careful observations were taken on the route, there can be no reason to doubt their correctness.

The trail of Capt. Sitgreaves, Topographical Engineers, down the Colorado

River, ought to give, if properly mapped, the true course and position of the Colorado River.

The more recent surveys of Lieuts. Parke and Williamson, of the United States Pacific Railroad Survey, in 1854, and that of the former of the present season, will doubtless give very truthful and valuable results. The establishment of the fact of the sinking of the Mohave River, is a feature of great interest in these surveys, and the publication of their entire report must afford much interesting matter. The survey of a railroad route for the San Diego and Gila Railroad Company, just concluded, gives additional information in regard to the topography of the mountainous region of the county, and in particular some interesting facts in relation to the hights of the different summits and passes through the mountains; and also a comparison of results of barometric observations at those points with those established by the level. By this comparison it is found that the difference of results of the two instruments is so small, that for purposes of preliminary investigations, when carefully observed, the barometer is a most valuable and reliable instrument.

OCCUPANCY OF LAND.

Large quantities of the arable and grazing lands of the county are held under Mexican or Spanish titles, and occupied by rancheros of the ancient order of shepherds and herdsmen. Many of them are averse to the changes and innovations brought about by the advent of American rule, and cleave manfully to the time-honored institutions of raw-hide ropes, wooden ploughs and stumpy wheeled ox-carts. It is due to this class of our population to state, however, that in point of integrity, sobriety, and all the qualities that go to make up a peaceable, law-abiding citizen, they bear a favorable comparison with the American portion of our community. Upon the few unoccupied lands unclaimed by old grants, a number of enterprising settlers have taken up claims for agricultural and grazing purposes, and have in many instances, raised large crops of grain and vegetables with little labor.

Some of the largest and most valuable tracts of arable land in the county, are those of the old missions, the titles to which are now in litigation, which prevents their permanent occupancy, by those desirous of becoming actual settlers. The most important among this class is the Mission of San Luis Rey, situated forty miles north of San Diego, upon the river of that name, comprising thirteen square leagues of the finest soil for culture within the limits of the whole State. This mission and ground has been occupied by a detachment of United States Troops, since the possession of the country by the Americans.

The Mission of San Diego, next in importance, situated but five miles east of San Diego, containing one square league of land, though formerly embracing many valuable ranchos in the neighborhood, is occupied and garrisoned by two companies of United States Artillery. This force has prevented the taking up of the mission lands by unauthorized persons. The whole valley is used, however, in common by the people of the town for grazing purposes, according to immemorial usage. The final decision of the vexed question of proprietary titles, will aid largely in the settlement, cultivation and development of a tract of country combining more advantages of climate, soil and capability of production, than any other district on the whole Pacific Coast; add to these the convenience of access from the sea through the Port of San Diego, which in itself is an advantage not possessed by any other district south of San Francisco, and it will be apparent that as high a state of prosperity would result from the settlement of this county, as can be exhibited in any other portion of our country.

LANDS, CULTIVATION AND PRODUCTS.

Those of our population who have more recently settled among us, have bestowed considerable attention upon the cultivation of the soil, but not to the extent that is necessary to supply the wants of the local population. A few acres in nearly every rancho in the county, are planted with grain and vegetables for the immediate use of the occupants, but no systematic attempt at raising grain for our home market or foreign consumption, has yet been made. Some ranchos have an area of two or three hundred acres laid down to grain, but the larger number are devoted to stock raising, to which the face of the country is far better adapted.

The sandy plain adjoining the town and at the mouth of the Mission Valley, has been cultivated in small portions with great success, and some most extraordinary crops of vegetables have been raised. Indeed everything indicates that if proper efforts were applied to this branch of industry, and greater advantages presented for the sale of the products of the soil, no county could show so abundant a harvest, a more thriving system of agriculture, or a larger proportional area of land under cultivation. It would be difficult to arrive at an exact estimate of the quantity of land now under culture, without an actual visit and inspection of each rancho and farm within the limits of the county.

That such a duty does not, and ought not, properly to belong to the County Surveyor, is needless to remark, unless that functionary is a statistical agent, assessor or census-taker also; in which case he would better serve his profession by quitting its ranks. My apology, therefore, for not incorporating with this report the various statistical data relative to the number and quantity of cattle, swine, beans, cabbage, goats, buckwheat, hay, hemp, barley, oats, onions, cheese, turnips, eggs, butter and beeswax, as contemplated by the law as given in your circular, must be, my very limited interest in matters so entirely unconnected with my profession, and confessed ignorance and want of information upon the subjects indicated, not to mention the great and unremunerated expense inseparable upon the performance of the duty. My general impression of the live stock department is, that several thousand cattle, of a fierce and savage breed, infest the valleys of this whole county, making the Surveyor's duty of running lines through their range, a matter of some personal risk and uncomfortable foreboding—(I had an unsuspecting flag man prostrated once by a charge in the rear from an infuriated bull)—that swine are not numerous, judging from the fact that pork is a rarity in our market. A similar remark is applicable to sheep and goats. On the whole, fruits, vegetables and dairy productions are not apparently plentiful, with the exception of grapes and melons, which, during the season, are more luscious and abundant than in any other locality within my knowledge. In passing over the county I have noticed, however, the capabilities of the soil and climate for productions of different kinds, and am of opinion that it is perfectly well adapted to the raising of the following articles: Wheat, barley, rye, oats, maize, buckwheat, peas, beans, flax, potatoes, sweet potatoes, turnips, beets, parsnips, carrots, onions, clover, hemp, tobacco, mustard, indigo, grapes, apples, peaches, pears, plums, pomegranates, apricots, melons, pumpkins, squashes, cucumbers, *tunas*, dates and figs. Most of these already grow and flourish wherever attended to, but I am not aware of the supply being plentiful.

Article six of your circular, desires my "views as to the presence, cause and remedy of any disease or other mischief preventing a full return and increase of crops."

My view of the matter is simply, that there is no existing disease but laziness, and no mischief but indolence to prevent a full return and increase of crops in

this part of the country, and no better remedy occurs to me for these afflictions, than a little wholesome industry.

INTERNAL IMPROVEMENTS.

One of the greatest obstacles to the growth and prosperity of the County of San Diego, is the want of adequate communication with the interior. The great body of habitable land is among the hills of the Cordilleras, accessible only by steep and rugged natural roads, which, in consequence of the impassable nature of the valleys and narrow cañons, are carried frequently over high spurs of the mountains, termed *cuestas*, to descend again after the obstacle is turned. The main coast road, about ten miles north of San Diego, has been improved by the construction of an entire new road-bed through a narrow cañon, where it formerly ran over a steep hill at an angle of not more than thirty degrees from the perpendicular. Though the new portion of the road is not more than two miles in extent, it has saved ten times its cost in wear of vehicles and horseflesh. The grade by the new road is now reduced to about one in sixteen.

The road to San Bernardino, by way of Temecula, which ascends a steep hill after leaving the valley of San Luis Rey, has been proposed to be straightened and reduced in grade, which would bring a vast amount of trade and travel to the Port of San Diego, now diverted to Los Angeles by reason of this obstacle. Subscriptions were made, both in San Bernardino and San Diego, to forward the undertaking, but, like many other projected improvements of less importance, the matter remains in abeyance.

The construction of a wharf at New San Diego in 1850, and the commencement by Government, in 1853, of the dam for turning the course of San Diego River into False Bay, north of the true bay, are the only works upon which any great amount of capital has, as yet, been expended.

Under the head of "Internal Improvements" properly belongs the proposed railroad to the Colorado, and to the Mississippi River, by the southern route.

THE SAN DIEGO AND GILA RAILROAD

Is intended to connect the Port of San Diego with the mouth of the Gila River, forming the California link in the great chain of the Pacific Railroad from the eastern to the western coast of America.

In the latter part of 1854 a railroad company was organized in San Diego, under the title of the "San Diego and Gila Southern Pacific and Atlantic Railroad Company," with a capital of $5,000,000; the corporation being formed in accordance with the general railroad law passed at the previous session of the Legislature. An assessment of one per cent. was immediately laid upon the subscriptions already made to the stock, amounting to over $200,000, and the preliminary surveys commenced soon after. The first survey was intended to demonstrate the fact that a practicable pass for railroad purposes existed in the Cordilleras range of mountains, between San Diego and the desert. Accordingly it began at the foothills of the western slope of the range, and was continued through the valleys and cañons leading to the lowest known summits of these mountains; thence through a system of similar passes to the foothills of the eastern slope, where it connected with the United States Railroad Survey of Lieutenants Parke and Williamson.

The fact being established, that a feasible route existed, though involving somewhat higher grades than would have been deemed expedient in the early days of

railroad enterprises, a further survey was resolved upon to connect the base of the mountains on the west with tide water. This survey has also been completed within a few weeks; and the results of the continuous survey throughout the whole route has been presented to the company.

From the Bay of San Diego for the first thirty miles, the line is located along the narrow valley of the San Diego River, its course being nearly north-east to the mouth of Oakwood Cañon, a gulch tributary to that stream; thence running nearly north through that cañon, passing over the valley of San Isabel, its summit, and the valley of San José, to Warner's Ranch, a distance of about thirty miles. Here the course of the route is deflected to the east and south, and for the next thirty miles descends from the summit at Warner's to the borders of the Colorado Desert, the head of Carriso Creek at Vallecito.

From this point the line follows very nearly the course of the wagon road to the mouth of the Gila, at Fort Yuma.

The following is a table exhibiting some of the elevations on this route, with the average grades of the line actually measured and leveled, together with the deduced grades of the best observed location for the road-bed, which it will be necessary to carry well up the side hills of the different valleys, in order more nearly to equalize the grades of the different portions of the line as well as to balance the excavations and embankments:

TABLE OF GRADES

Of the Proposed Route for a Railroad from San Diego to the Gila River.

STATIONS.	Intermediate Distances.	Total Distances.	Average Grade, per mile, between level Stations.		Altitude in feet.		Deduced grade of best obser'd location.	LOCALITIES.
			Ascending.	Descending.	Above previous Station	Above mean High Water.		
Bay of San Diego—								
San Diego Mission	7·048	7·048	9·14	..	64·46	64·46	9·14	Valley of San Diego Riv.
Entrance of Cajon Gap	2·658	9·706	13·74	..	36·53	100·99	13·74	" "
" " Valley	2·760	12·466	65·84	..	181·73	282·72	65·84	" "
Cajon Rancho, (Santa Monica)	7·305	19·771	17·75	..	129·67	412·39	17·75	" "
Foot of Miner's Hill	5·160	24·931	23·68	..	122·23	534·62	61·4	" "
Capitan Grande, (Indian Village)	7·348	32·279	26·27	..	193·04	727·66	61·4	" "
Pinery Brook	3·610	35·889	39·00	..	140·79	868·45	107·5	Oakwood Cañon.
San Isabel Trail	0·850	36·139	66·64	..	56·65	925·10	107·5	"
Base of Devil's Knob	0·661	37·400	53·22	..	35·13	960·23	107·5	"
" Angel's Peak	1·32	38·72	96·09	..	126·85	1,087·08	107·5	"
Turtle Falls	3·60	42·32	171·61	..	617·78	1,704·86	107·5	"
San Isabel Falls	1·13	43·45	181·32	..	204·90	1,909·76	107·5	"
" Gulch	1·70	45·15	254·46	..	432·59	2,342·35	107·5	"
" Valley, (entrance)	1·42	46·57	452·71	..	642·85	2,985·20	107·5	San Isabel.
" Rancho	2·27	48·84	..	12·32	— 27·98	2,957·22	64·72	"

Summit of San Isabel	2·33	51·17	172·95	..	402·94	3,360·16	100·00	San Isabel.
San José Valley	3·44	54·61	..	175·00	—591·97	2,768·19	— 92·00	Warner's Ranch.
Warner's Rancho	4·35	58·96	58·37	..	253·93	3,022·12	26·21	"
" Pass	4·92	63·88	123·46	..	607·44	3,629·56	—102·00	"
Oak Grove	1·90	65·78	..	263·73	—501·09	3,128·47	—106·00	San Felipe Valley.
Outlet of Volcan	6·84	72·62	..	90·45	—618·79	2,509·68	—106·00	" "
San Felipe, (Indian Village)	2·08	74·70	..	73·25	—152·38	2,455·30	—106·00	" "
Head of San Felipe Valley	5·59	80·29	36·80	..	205·75	2,563·05	36·80	" "
Entrance of Cañon	2·46	82·75	30·53	..	75·11	2,638·16	— 30·50	The "Vallecitos."
Mouth of "	1·42	84·17	..	189·16	—268·62	2,369·54	—100·00	"
Rincon, (Indian Village)	3·31	87·48	..	96·51	—319·46	2,050·08	—100·00	"
Mouth of Puerta Cañon	1·04	88·52	..	195·28	—203·10	1,846·98	—100·00	"
Vallecito, (Indian Villages)	3·98	92·50	..	51·31	—204·23	1,642·75	—100·00	"
Carriso Creek, (watering place)	18·00	110.50	..	66·54	—1197·75	445·00	— 66·00	Valley leading to Desert.
Near Sackett's Wells	15·00	125·50	..	8·86	—133·00	312·00	— 8·80	Colorado Desert.
Great Lagoon	9·00	134·50	..	42·44	—382·00	— 70·00	— 12·80	"
Near Little Lagoon	11·00	145·50	11·45	..	126·00	56·00	12·80	"
Alamo Mocho	14·00	159·50	8·57	..	120·00	176·00	8·50	"
Cook's Wells	20·00	179·50	1·70	..	34·00	210·00	1·70	"
Pilot Knob	14·00	193·50	2·09	..	30·00	240·00	2·09	Colorado River.
Mouth of Gila River	7·00	200·50	8·57	..	60·00	180·00	8·50	"

The column of "best observed location" is deduced from a careful examination of the side slopes of the valleys through which the line was surveyed; the surveys of the cross section of these valleys in general demonstrating that no enhancement of the cost of construction would ensue from placing the road-bed at a considerable elevation above the actual trail of the surveying party. Indeed, the safety of the superstructure would compel such a location, the district being subject to heavy freshets during the rainy season; and the beds of the different streams traversed by the line of survey indicate the occurrence of immense floods, whose volume has been so great as leave accumulations of driftwood in the topmost branches of high trees on their banks. The additional expense of the few bridges, or embankments, that may be required in passing the mouths of gulches and cañons intersected by this location, will probably offset the cost of protecting a lower track from the consequences of these torrents. From the head of Carriso Creek, at Vallecito, to Fort Yuma, the hights are taken from the tabled reports of Lieutenants Parke and Williamson; and in one or two instances the notes of Major Emory have been used. In cases where the authorities differ, I have selected the result which is more nearly in accordance with my own knowledge of the ground. The distances, which will be often found to vary from the other reports, are in all cases derived from actual measurement with the chain, made by myself while engaged in the survey of the United States public lands, during the years 1854 and 1855.

The character of that portion of the desert just referred to, and the part over which the line passes, whose grades are given below, is now accurately known, and I am enabled to state, from frequent examination of the ground, that *three-fourths of the entire distance is already graded and prepared by nature* for the reception of the rails.

W. P. Blake, Esq., Geologist, of United States Railroad Survey, remarks in his report, "instead of the whole plain being composed of loose and sandy materials, as has been supposed, its basis is a compact blue clay, so hard that the passing of mules and wagons scarcely leave tracks upon it."

Lieutenant Williamson says: "It is sufficient for me to say, that the desert may be considered the least difficult part of a railway route to California." The surface is not truly level, but composed of long swells of land, or slightly inclined planes, whose slopes are extremely gradual, as may be seen from the appended table:

TABLE OF GRADES

Of a Proposed Route for the San Diego and Gila Railroad, from the foot of Warner's Pass, to the mouth of the Gila.

STATIONS.	Distance in miles.		Grade, per mile, between Stations.		Altitude in feet.		Grade of best observed Locations.		LOCALITIES.
	Intermediate	Total from San Diego.	Ascending.	Descending.	Above previous Station	Above mean High Tide.	Ascending.	Descending.	
San Felipe, (Indian Village)..	..	74·70	..	..	..	2,455·30	..	..	San Felipe Valley.
" Cañon, (entrance)	2·25	76·95	33·48	33·48	— 98·00	2,357·30	..	33·48	" "
Rocky Point.....	1·54	78·49	..	136·80	—210·70	2,146·60	..	103·00	Valley lead'g to Desert.
Mouth of Cañon.....	1·13	79·62	..	200·52	—226·60	1,920·00	..	103·00	" "
Gorge of the Valley.....	7·40	87·10	..	60·00	—444·00	1,476·00	..	80·00	" "
Base of Mountain, (Desert) ..	12·20	99·30	..	65·32	—796·00	680·00	..	65·30	Colorado Desert.
Wide Arroya, (Carriso Creek)	10·80	110·10	..	60·00	—630·00	50·00	..	60·00	" "
Arroya of New River	20·00	130·10	..	7·50	—150·00	—100·00	..	7·50	" "
Seven miles N. of Cook's Wells	41·00	171·10	1·46	..	600·00	500·00	1·46	..	" "
Mouth of Gila	18·00	189·10	13·66	..	—320·00	180·00	..	17·70	" "

The route from the foot of Warner's Pass, at San Felipe, to Fort Yuma, by way of San Felipe Cañon, and a nameless valley leading to the desert, is believed to present facilities for construction superior to that followed by the present wagon road. The preceding table of grades of this line, is formed in part from the railroad survey, and the remainder from my survey of the public lands in that section, verified by the results given in the published report of Lieutenants Parke and Williamson.

By this line some ten miles of distance are saved, and the grades are capable of being made more favorable, as well as more nearly to conform to the natural surface of the ground. Fewer obstacles, in the form of sand hills, are encountered in this improved location; and the supply of water is certainly as reliable as on the other line. It is true that for the first six or eight miles after leaving the valley of San Felipe the cost of building the road must be greatly beyond the average; but after that no obstacle presents itself throughout the entire distance to the mouth of the Gila. It is evident that some considerable amount of bridging, or filling, in order to pass the two or three arroyas, cut out of the hard clay of the desert by the rains of the wet season, will be incurred in this more direct location, but the cost will be offset by the sum required to keep a track clear of the drifting sand which will be encountered on the more southern line. An important consideration is the fact, that this line will be built wholly within the territory of the United States, though very near, and for some distance parallel, to the Mexican boundary; while the line proposed adjacent to the wagon road, will pass into Mexico fifty miles before reaching the Colorado River, and continue on foreign soil for about that distance before returning to our own territory.

FACILITIES FOR MANUFACTURING.

On the summits and slopes of the mountains near San Isabel, an extensive growth of lofty pine and heavy oak timber, occupies thousands of acres. This timber is readily available for every needful purpose, and can be easily transported to the tide water. The pine is of the peculiar California variety; ratherc oarse in texture, but affording lumber in pieces of great length, generally free from knots, and not difficult to work. The oak is not so well adapted for use, being gnarled and knotty. No small quantity of sycamore is found in most of the valleys, which is used chiefly for firewood. No redwood, it is believed, exists in this part of the country. Saw mills have never been erected in this neighborhood, notwithstanding the high price of imported building material, the abundance of standing timber and the number of mountain streams adapted to milling purposes. The creek of San Isabel rises in the region called the Pinery, and for several miles down its course, presents valuable sites for water power, which is available throughout the year, the volume of water being nearly the same in summer as in winter. Within a year a flouring mill has been established in the vicinity of the town, employing two run of stone, at present; and from the fact of being dependent upon the wind for motive power, its performances are entirely inadequate to the wants of the community. The material most general in use for building, is the sun-dried brick called *adobe*, of which nearly every dwelling in the county is composed. Two of our enterprizing citizens have commenced the manufacture of brick in the Mission Valley adjoining the town, and a large kiln has just been set up and burned. The machinery is new and patented, and the manufactured article of superior quality. In connection it is purposed to manufacture tiles and pottery, for which the clay of the district is well adapted.

SUPPLY OF WATER.

Irrigation could, without doubt, be successfully resorted to in our dry climate; and in the days when the Missions were flourishing, its importance was acknowledged by the worthy Padres who held them in charge. Remains of the old aqueducts used in watering the fields and gardens belonging to them, are seen in various stages of decay. At the Mission of San Diego is a brick canal of several miles in length, formerly used to bring the water employed in irrigation from an artificial reservoir constructed in a valley above the Mission. By the aid of a few repairs this canal might again be made available, and the sun-burnt fields of the Mission Valley once more smile in verdure throughout the year.

Reservoirs, on a similar plan, in all our valleys, would afford a continual supply of water, both for irrigation and ordinary consumption. Every river on the coast is dry during some part of the year; and the inhabitants in the vicinity of them dig temporary wells in the sandy beds, during the dry season, for domestic supply.

An undertaking to furnish the town of New San Diego with water from an artesian well, in the year 1850, failed only for want of means to carry it through. A depth of two hundred feet was reached before operations were suspended; and no obstacles of a serious nature were encountered in the progress of the work. Another well of the same class was commenced at the village known as the Playa, or Beach, on the shore of the bay, but from some similar cause, the interest in the enterprise subsided, and finally dried up, and it was abandoned, after having penetrated the earth a distance of about five hundred feet.

NAVIGATION OF THE COLORADO.

From the Gulf of California to the mouth of the Gila, the Colorado is readily navigable to vessels of two feet draft, at lowest stages of water; and two steamers are in constant transit to and from Fort Yuma, at its mouth, engaged in carrying Government supplies for the use of the troops which garrison that important post. The current is very swift and strong, requiring unusual motive power to propel the boats against it. A question of exceeding interest, as to whether the Upper Colorado, which bounds so large a portion of our State, is, or is not, navigable to steamers of any possible construction, has oftentimes been the subject of considerable discussion. Some enterprising frontiersmen have penetrated that upper wilderness, and have come floating down to the settlements on a raft, or in a rude *pirogue;* relating tales of wonderful adventures with Indians, beavers and bears, inhabiting the fertile valley of this turbulant stream.

The great cañon, variously stated to be from one hundred and fifty to three hundred miles up the river, is probably the limit of successful navigation with freight-carrying craft. Beyond this, which is doubtless out of the bounds of the State, the river is described to be deep and rapid, and navigable for small craft.

From my survey conducted the past season, up the river for thirty miles beyond the mouth of the Gila, I am inclined to believe that no difficulty would be found up to that point; and for the many miles that the eye could reach still further up, nothing like an obstacle was discerned.

The Colorado Valley is not very wide on the California side, except where the shifting of the channel had made an abrupt bend in its course; but the business of transportation to and from the valuable lands for settlement, on the other side of the river and north of that place, would accrue, of course, to the citizens of our State, whose interests are at the mouth of the River Gila.

A ferry company at Fort Yuma is doing an excellent business in the transport of travelers and stock across the river, on the emigrant trail from Texas. The highway to Sonora and Chihuahua, also crosses at this point; and no small amount of goods and animals are passing daily to those and other provinces of Mexico. It is apparent that this branch of trade is yearly increasing, though the roads on either side of the Colorado are over deserts of two and three hundred miles each in extent.

MINING AND MINERALS.

Early in the present year the discovery was made that gold existed in the hills near the Rancho of Santa Maria, not far from San Pasqual, and about thirty miles north-east from San Diego. Upon this announcement a considerable number of persons repaired to the spot, with the necessary tools and supplies, set up their camps in the gulches, and fell to digging with great industry. Reports of greater or less good fortune were heard from the miners from time to time, during a space of several months; but the only outward and visible sign of success apparent to our citizens, was the receipt of a few minute particles of dust in payment for goods; in no instance, I believe, exceeding in amount the sum of ten dollars. As a matter of course, the energy of the diggers abated in proportion to their want of success; and as no enterprise can be conducted without the sinews of war, a stoppage of supplies ensued, and the diggings were abandoned in disgust. No subsequent attempt has been made to work the mines, which are of the placer description; nor can operations ever be resumed successfully until the wages of labor are so reduced as to allow of the employment of capital and skill with advantage. Specimens of silver ore have been brought in from the vicinity of Cuyamac Mountain; but no efforts to examine and work the locality have as yet been made.

Reports of the discovery of zinc, copper and coal, have frequently been heard of in the vicinity, but the energies of our people being directed to other and more remunerative objects, such rumors have not been accustomed to be regarded with much interest. Upon the desert, at a point east of Agua Caliente, there is a large salt lagoon, or lake, from whose borders the Indians have been in the habit of supplying themselves with salt. In conducting surveys upon the desert last year, I discovered several springs of intensely salt water, around which were saline incrustations of considerable thickness, affording salt of excellent quality.

About half way across the desert, due east from San Felipe, is a group of springs containing carbonated soda water, which boils up from below, and is kept in constant effervescence by the escape of large quantities of gas. These springs were found and visited by my surveying party about a year ago, and their water used freely by both men and animals. I consider it very agreeable in taste, and the discovery a valuable one in the event of a new route across to the Colorado being established. [These springs are noticed at length in the report of W. P. Blake, Esq., Geologist United States Railroad Survey.]

The hot springs in Agua Caliente, a district in the mountains near the desert, possess highly medicinal properties, and are much resorted to by invalids and others, for bathing purposes. It is claimed by the resident Indians that their virtues are so potent as to control almost every disease which flesh is heir, and to prolong life itself almost indefinitely. Great benefit is undoubtedly to be derived from their use, and the increasing number of yearly visitors to the locality indicates that our copper-hued brethern are not without proselytes to their hygienic faith.

Both hot and cold water issue from the surface within a few feet of each other, and the required temperature is readily obtained by combining the two streams in proper proportions. No analysis of the water has been made to my knowledge, but it has a highly sulphurous odor, and appears charged with considerable quanti-

ties of sulphuretted hydrogen gas, which is evolved in minute bubbles, keeping the surface in continual agitation. Its ordinary temperature is not far from 120° Fahrenheit.

NEW WAGON ROAD TO THE COLORADO.

The subject of a shorter road to the mouth of the Gila has attracted considerable attention of late, and various routes have been proposed, tending to reduce the distance from two hundred and twenty-six to one hundred and fifty miles, or thereabouts. By the judicious expenditure of ten to twenty thousand dollars, an immigrant road could be constructed from this place to the edge of the desert at Carriso Creek, over a district abounding in water and grass of the best quality. On the old line of road there is no good grass or water beyond Warner's, leaving one hundred and fifty miles to be traveled with an indifferent supply of both these necessaries. By the new line, as soon as the plain of the desert is passed, the traveler enters upon a fruithful and well-watered region. This road would turn from the main one at Carriso Creek, running nearly west to the rancho of William Williams; thence over rolling and table lands to the San Diego, or Sweetwater, River Valley, and following either to the bay.

The aid of the State has been solicited for this project, but the matter has been postponed by the Legislature from time to time; and meanwhile the immigration is retarded by the hardships of the road, and the State is a sufferer for want of population. A renewed effort is to be made at the approaching session; and for the sake of the public welfare, it is to be hoped the assembled wisdom will see that its interest demands the immediate construction of the road. A good reason can hardly be offered why the immigrants by the southern route should not be furnished with the same facilities for reaching California that are enjoyed by those coming in at a point more northerly.

SURVEY OF COUNTY LINES.

The northern line of this county is the only one that requires to be surveyed and marked, for the purpose of mapping, as it is chiefly on the lines of ranchos, which are known to be irregular, and sometimes uncertain. It is doubtful whether this boundary could be changed so as to satisfy the proprietors in that part of the county, and it is not certain that a township line, or standard parallel of the U. S. survey would render the boundary more distinct or less liable to the disturbance, or destruction of its monuments. A survey as far as the summit of the mountains bounding the agricultural district, is all that seems to be required at present, as the line is continued beyond that point, at a given course, which is that of the south boundary of the State.

STATE MAP.

I have no hesitation in saying that the map of the State of California, approved and declared to be official by Act of the Legislature, whatever may be its reputation for accuracy in the northern counties, is most lame and impotent in its delineations of the topography of this part of the State. Places are given upon the map that are new to our oldest residents, and fabulous localities are bestowed upon us gratis, and furnished "officially" with a local habitation and a name. Roads are laid down thereupon, over districts which never have been, and in all human probability never will be, trod by mortal man, and old and well-known points are either

stricken out of existence, or baptized with new and unheard of appellations. The number of rivers in the county is not far from correct, but their locations and courses do violence to all notions of topographical propriety. The faint shadowings of mountains over some portions of the district, hardly gives us a complete idea of their extensive proportions, nor does the vast and important region known as the desert, seem to have been considered worthy of even a name. The road to Fort Yuma is very conveniently located on the map, being a great improvement over the one upon the ground, and the numerous wells placed adjacent thereto by our ingenious geographers, must afford a grateful solace to the thankful and thirsty traveler, should he ever succeed in finding them.

Plainly and seriously, this map as far as it relates to this section of the State, is a sham and an imposture, altogether as disgraceful to the authority which indorsed it, as to its makers or compilers. A crude and ill-digested performance like this, conducted with parsimony and executed in haste, cannot fail to bring reproach upon the profession, as it has already wronged the public who authorized its publication.

A map worthy of California, and entitled to respect as competent authority, never could have been constructed in the short space of time allotted to the one under consideration, even with a large and able corps of surveyors, observers and assistants, and liberal financial aid from the State—none of which advantages I suppose that enterprise to have enjoyed.

No reliable map of the State can be produced, I think, unless liberal appropriations are made to carry on the undertaking, in order that the services of skillful and experienced practitioners can be secured for a term of years, the longer the better, so as to determine with the utmost accuracy, by astronomical and trigonometrical measurement, the exact position of every important point. The only system by which this can be accomplished, is that of covering the entire area with a net-work of triangles, and this we know is a work of patient and extended labor, and by no means a matter of speedy accomplishment.

Those States and foreign countries which have hitherto engaged in such surveys, have acted in accordance with similar views, and few of their surveys are yet completed, their publications being generally confined to detached and important localities. The "ordnance survey" of England and Ireland is still in active prosecution, and although it has been forty years in progress, it is not yet complete as a whole. The survey of France, commenced some sixty years since, has not been published, nor is our national coast survey much more than commenced, though it has been conducted with energy and expedition, with every assistance the Government could furnish, for twenty-three years. The State surveys of New York, Massachusetts, and several other States, were from eight to fifteen years in progress, under exceedingly liberal auspices, before any results were published, and these were even declared unsatisfactory by their compilers, owing to the brief time allowed for their completion.

With the plain history of similar undertakings before us, and the light of their experience as a guide, it would be unwise for us to expect the production of a correct and finished map, before time and means had been provided to perfect a thorough and minute survey. The publication of a worthless, because inaccurate map, works harm in more ways than one, and not the least is the discredit it throws upon a profession claiming some hard-working and deserving members.

Private enterprise can furnish all the crude and cheap maps that are wanted for ornament and show, and are demanded by those for whom such things are sufficient, but an enlightened community, and an age of intelligence requires a

high degree of perfection in a public work like this, susceptible in all its details, of the most rigid demonstrative accuracy.

I have the honor to be with high respect,
Your most obedient servant,

CHARLES H. POOLE,
Surveyor San Diego County.

County Surveyor's Office,
San Francisco, November 1, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with your instructions, I beg leave to submit the following report:

SWAMP AND OVERFLOWED LANDS.

There are about 11,000 acres of swamp and overflowed lands in this county, the whole of which are covered by Mexican grants, and is in my opinion not reclaimable at any reasonable expense.

I have not located any claims upon these lands since the Act of the last Legislature in regard to their disposal.

COUNTY BOUNDARIES.

The boundary line between this county and Santa Cruz, for about ten miles, should be officially run as soon as possible. The number of acres embraced within the limits of this county is about 207,000, the greater proportion of which is mountain land, and unfit for cultivation, being only of use as pasture land.

The number of cattle, swine, horses, etc., is too fluctuating for an opinion.

Any attempt to compute the agricultural products of the county would be impossible for me, but I presume the necessary information could be had from the Assessor, who I suppose will embrace that in his report.

I have just finished a topographical map of this county, showing all the county roads, streams, rancho lines, etc., in fact everything of importance within the county. It is not yet lithographed, but when it is I will file a copy in your office.

The State Map, as regards this county, is drawn upon such a small scale that no idea of its accuracy can be formed.

Very respectfully,
Your obedient servant,

J. J. GARDINER,
Surveyor San Francisco County.

County Surveyor's Office,
San Joaquin Co., Dec. 10, 1855.

To S. H. Marlette, Esq., Surveyor-General:

Sir:

In accordance with your request, I send you a report of my labors and observations since I have been occupying the position of County Surveyor, but as that time has been limited to two months, you will, of course ,expect from me but a very meager report.

Since I came into this office I have been the most of the time engaged in surveying tracts of swamp and overflowed land. The greater portion of the lands I have surveyed can, and no doubt will, be reclaimed, as also as many thousand acres more for which application has been made, but which I have, as yet, been unable to survey. From October 1 to December 1, I have made sixty-three surveys of swamp land, which include an area of 13,931 acres, copies for the greater portion having been forwarded to your office. Of the remaining portion I have not, as yet, had an opportunity to obtain the necessary evidence of their being swamp land. In addition to those surveys already made, I have now on file in my office affidavits which will include as much land as that already surveyed. I am of the opinion that all of the swamp land in our county, which is at all available, will be purchased within the coming year. We have many thousand acres of tule land that must lie as they are for many years to come. I am well satisfied the time is coming when these lands will be sought for as being the most valuable tillage land in the State. Experiments in this vicinity have fully demonstrated the fact, that tule land, when reclaimed, is admirably adapted to gardening purposes; but at present the cost of reclaiming the land would be so great as to deter any person from making the attempt upon an extensive plan; it may, and will, no doubt, be done, before many years, by combination of individuals. And in this connection I wish to say, that I think some plan different from the present one must be adopted, in order to survey the tracts of tule land which may be called for. Applications have frequently been made to survey tracts of tule land upon the San Joaquin River and Stockton Slough; at a distance, in some cases, of ten or twelve miles from any township line of the United States survey, and where it is altogether impracticable to extend the township, or sectional lines, from the plain, as it is almost one solid mass of tule, with frequent deep ponds and sloughs.

Two methods for surveying these lands have suggested themselves to my mind, which I will mention: The first, is to erect monuments upon Mount Diablo meridian, and at other convenient points having a measured base; and from, and by, these monuments, the position of the different tracts might be obtained by triangulation. The second method is, to make a correct survey of the San Joaquin River and Stockton Slough, in connection with the United States survey; and in making such a survey to establish permanent posts, or monuments, of some kind, fixing the position of each post upon the township plats, and by that means the position of each tract of land could be easily defined. I question whether the quantity of those lands now required would warrant the expenditure that would be incurred by either of these plans, but I can think of none more feasible; and, as the State has said, "the land must be surveyed," some plan must be adopted by which such surveys can be made, I submit these methods to your opinion of their feasibility; but in any event I am of the opinion that the State should make a survey of the San Joaquin River, under the direction of the Surveyor-General. I am at present

altogether unable to make the surveys under instructions. There is one subject to which I have frequently called the attention of the Court of Sessions, and more recently the Board of Supervisors, and which has so far been neglected. I refer to the south-westwardly boundary of this county. The line, at present, is an imaginary one, and its position upon the ground is a point upon which there is a great difference of opinion, and I think the line should be run, and proper monuments set up. It is now, however, too late to run the line this winter, as a party might be encamped for a week and not be able to obtain the variation of the needle on account of cloudy weather.

Of our county roads and bridges, I really wish to say nothing, for they are in such a condition as to speak for themselves, particularly to a person traveling over them now that the rain has come. So far as my own experience is, the county has never built a rod of road, or a single bridge, culvert or causeway; nor do I think there is a present prospect that they intend doing so. It is really shameful, that in a county where good roads are so much required, that so little attention should be given them. Private individuals have built some bridges and made some repairs upon the roads, but I am not aware that the county has ever been guilty of doing anything of the kind.

I think the Act of the last session of the Legislature, creating a highway tax, was a good Act; and I am now in hopes that another year will see some roads properly built.

Sometime last year an artesian well was commenced in this city, and bored to the depth of four hundred feet. It was supposed that water could be obtained within that distance, and therefore the contract for the work called for but four hundred feet, so that when the contract was fulfilled the work ceased. The work was done at the expense of the county and city. At present there is no prospect of the work being carried on. If water could be obtained within any reasonable distance by the boring of artesian wells, they would be of inestimable advantage to this county, as there is now many thousand acres of land lying waste which would be valuable if water could be obtained for irrigation.

I was much pleased with many suggestions, or recommendations, made by you in your report at the last session of the Legislature, one of which I believe was, "that none but Civil Engineers should be eligible to fill the offices of County Surveyors, and that sufficient inducement be offered competent men to take the office." And in this connection I wish to say, that my opinion is, that the County Surveyor, if he can give evidence of his ability, should have the general direction and supervision of the building and repairing of all roads, bridges, etc., upon all of the public highways in his county; as it is fair to presume that if he is a competent engineer he is better capable of building good roads than any person who has never made such things a matter of business or study; and I am of the opinion, that any public work is better managed by one head, if that head is good one, than by a dozen. In such event, the salary, or per diem, and traveling expenses, while attending to such duties, should be sufficiently liberal to induce him to attend to the matter personally and promptly, otherwise any enactment would be a dead letter. If the per diem should be left in the hands of the Board of Supervisors, it would in most cases be so low that no County Surveyor, who was really competent to discharge the duties, would give the matter any attention. So far as our county is concerned, good public highways are of the greatest importance, and yet it is a matter that seems to be almost entirely lost sight of.

The separation of the swamp and overflowed land from the high land, is another matter of importance which should be attended to, but I have already extended my remarks, perhaps, too far.

The general statistics of this county I am unable to give you, never having

given the subject any attention, and must therefore refer you to the report of our County Assessor.

Respectfully, your ob't serv't,

GEO. E. DREW,
County Surveyor, San Joaquin County.

County Surveyor's Office,
San José, Dec. 4, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

Owing to an unexpected pressure of professional business, which could not be delayed, the time has been consumed which I intended to expend in gathering statistics, in accordance with the instruction of your circular. Hence the late date of this report.

SCHOOL LAND WARRANTS.

No School Land Warrants have been located in Santa Clara County since the 23d of September, 1854. Several warrants, located in other counties, and not canceled, have afterwards been brought to this county for location, thereby causing much trouble. By a reference to your report for 1854, I see that similar frauds have been practised, to a great extent. That this matter should be attended to without delay, is obvious.

SWAMP AND OVERFLOWED LANDS.

No application has been made, to this office, for a survey of any portion of the swamp and overflowed lands in this county. It is not probable that there will be any purchasers for such lands until a portion, at least, of the land held under private grants, and now in the market for sale at a low price, is disposed of. With the aid of the U. S. Township plats, together with field notes in this office, I could furnish a pretty accurate map of the swamp and overflowed lands in this county.

It would be impossible, without the aid of a map, to add to the topographical information concerning this county, now in your office, and contained in the report of my predecessor, dated Dec. 15th, 1852.

COUNTY MAP.

During the past summer, I furnished the Board of Supervisors with a map of Santa Clara County, compiled from map and field notes of County Surveys on file

in this office, together with other material in my possession. Such a map would, of course, give but an imperfect idea of the geography of the county; still it might be of use in making up a map of the State. I shall endeavor to transmit a copy of it to your department during the winter. The necessary surveys for a complete topographical map, showing the boundary lines of the county, would cost several thousands of dollars.

MAP AND FIELD NOTES OF COUNTY LINE.

I have learned from private sources, that portions of the boundary line of Santa Clara County have been surveyed by the State, but up to this date, no map or field notes of such survey have, to my knowledge, reached this office. I have been lately informed, however, by Mr. Wright, the gentleman who surveyed the line between this and Santa Cruz County, that a copy of the map and field notes of the line will be forwarded to me in the course of a few weeks.

COUNTY BOUNDARY.

It is quite important that about thirty miles of the north-eastern boundary of this county should be run during the ensuing year, as large settlements are rapidly springing up in that vicinity. The probable expense would be about thirty dollars per mile.

GRAIN.

The principal agricultural products of the county, I estimate as follows:

	Acres.	Bushels
Wheat	20,000	300,000
Barley	3,000	90,000
Oats	1,500	60,000
Rye	75	1,875
Corn	300	6,000
Buckwheat	20	400
Totals	24,895	458,275

Garden vegetables, of almost every description, have been successfully cultivated and raised; in what quantities I have not ascertained.

FRUIT TREES, ETC.

Orchards have been set out, and vineyards planted, in every part of the county. I estimate the number of fruit trees as follows:

Peach	35,000
Apple	30,000
Pear	15,000
Cherry, Plum, Quince, Apricot and Fig	5,000
Total number of all kinds	85,000

This does not include the vast number of trees of the choicest varieties, contained in the numerous nurseries situated in the vicinity of the City of San José.

Grape vines are generally thrifty and fruitful. One vineyard of 6,000 vines, yielded during the past season, an average of ten pounds of grapes to a vine.

There are about 40,000 grape vines in the county, of which, probably, 20,000 bore fruit during the past season.

CROPS DAMAGED OR DESTROYED.

The wheat crop was badly injured in many parts of the county, by both rust and smut. This, together with the depredations committed by ground squirrels, has reduced the average yield of the valley at least one-half. After an exceedingly dry winter and spring, ground squirrels have become very numerous and troublesome. Like the inhabitants of Sebastopol, having intrenched themselves in the dark recesses of the earth, they defy all the attempts of civilization to dislodge them. Alliances have been formed, however, for their destruction, and what, with cold water and cold lead, artesian wells and strycnine, fond hopes are entertained of a triumph over these enemies of industry.

ARTESIAN WELLS.

From ninety to one hundred artesian wells have been sunk in the northern portion of the valley within the last two years, many of which discharge upwards of five hundred gallons of water per minute, each.

A well, bored by Messrs. McLenan & Allen, for the purposes of a tannery in the town of Santa Clara, threw a column of water, six inches in diameter, five feet above the top of the pipe—discharging, at first, stones of over two pounds weight. I have gauged the water of this well, and find that it discharges over 1,000 gallons per minute. It is two hundred and nine feet deep, six inches in diameter, and cost $600.

A well, sunk last spring on the road from San José to Alviso, two hundred and fifty feet in depth, only one hundred and fifty feet of which was piped, discharged enormous quantities of water, together with sand, gravel and large stones, until the ground for rods around it was undermined and precipitated into the gulf beneath.

Wells discharging equal volumes of water, and situated near each other, often vary greatly in depth. The strata encountered are also ever varying, both in kind and thickness.

In some wells the discharge of water is gradually diminishing ; in others it has ceased altogether. This, it has been ascertained, is owing generally to deposits of sand and gravel at the bottom of the well which are easily removed.

There are, however, instances where wells have been materially affected by the construction of others in close proximity.

COLLEGES AND SCHOOLS.

Santa Clara County is justly celebrated for its excellent schools and seminaries. There are two regularly incorporated colleges, both of which have the powers of conferring degrees and academical honors, and of exercising all the rights and privileges of any literary institution in the United States.

"Santa Clara College," located on the old Mission property, in the town of Santa Clara, was founded in 1851, by the Roman Catholic Church, through the agency of Father John Nobili, (a member of the Society of Jesus,) and was incorporated under an Act passed by the last Legislature. During the past year, a large number of professors have arrived from the Atlantic States and different parts of Europe, and permanently connected themselves with the institution.

Upwards of $50,000 have been expended on the buildings and grounds. The library numbers over 10,000 volumes.

Number of students in all departments, during last session, was one hundred and eleven.

The "University of the Pacific," located also in the town of Santa Clara, was founded in 1851, by the Methodist Episcopal Church, through the untiring perseverance of the Rev. Isaac Owen, and comprises a male and female department. In the male department, a class has advanced from the primary studies to the middle of the Sophomore year, of college proper. Number of students, during last year, was one hundred and thirty-four. In the female department, classes have advanced from the primary studies to geometry. Number of pupils during last year, was one hundred and nine.

The University is in possession of a good philosophical and chemical apparatus. The buildings and grounds of both departments are valued at $30,000.

The "Young Ladies Academy," situated in the City of San José, founded in 1851, and under the superintendence of the Sisters of Notre-Dame, is celebrated throughout the State as a Seminary of great excellence, and the favorite abode of literature and refinement.

During the last session there were one hundred and thirty pupils who boarded at the establishment.

Attached to the institution, is a free school for girls, with an attendance of fifty-three pupils. The buildings and grounds are valued at $75,000.

SAW MILLS.

We have eleven saw mills, which produce in the aggregate five millions feet of lumber annually. Average value of lumber at mill, $17 per thousand.

FLOURING MILLS.

Seven fine grain mills have been erected in the county, driving in the aggregate seventeen run of stones, and capable of manufacturing every description of flour and meal in the best possible manner. Two are steam mills, the balance are run by water power. One mill, with two run of stones, derives all its power from the water of several artesian wells. The probable cost of all the grain mills in the county is about $470,000. They are capable of producing five hundred barrels of flour per day.

STORES AND SHOPS.

The number of stores and shops, in which goods are sold, is one hundred and seventeen; and the capital invested in mercantile pursuits falls but little short of $300,000. The amount invested in the manufacture of flour, lumber, bricks, lime, boots and shoes, soda water, whisky, leather, flour and grain sacks, buggies, wagons, saddles, harnesses, agricultural implements and clothing, is about $500,000.

ROADS.

Your remarks and suggestions in relation to public roads, contained in your report, dated December 15th, 1854, deserve the serious attention of the Legislature. That California has, as yet, no road system adapted to her wants, must be evident to every one who has investigated the subject. Roads are, or should be, of at least two different classes. Those connecting large cities and towns need to be located with greater care, and with a view to greater permanency, than those merely affording a means of communication between small neighborhoods and hamlets. Although roads leading to distant localities may serve to accommodate small villages, still this should be a secondary consideration. At present, precisely the reverse is the case; and in many instances where several contiguous boroughs have been connected by short pieces of county road, the whole line, however zigzag it might be in its course, has been adopted as the great thoroughfare between, perhaps, populous and distant towns—which must be patiently meandered by the multitudes who have occasion to pass between the two points. A system of main trunks should be so located throughout the State as to connect important points by the most feasible routes and by lines as direct as the topography of the country will admit of. These should be under the direction of the State, and would afford, not only the means of an easy and rapid transit between important points, but necessarily accommodate in the best possible manner a majority of the villages and settlements throughout the commonwealth. After this, the construction of a few short branches would complete a system of roads at once simple and harmonious.

Yours, very respectfully,

LUCIEN B. HEALY,
Surveyor Santa Clara County.

Santa Cruz, Oct. 16, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In answer to your circular letter of June 16th last, I would respectfully submit the following report:

SURVEY OF COUNTY LINE.

In accordance with your instructions I have surveyed and marked the line separating this county from the Counties of San Francisco and Santa Clara, and will furnish to your office as soon as practicable, a map of the line of survey and the accompanying field notes.

COUNTY MAP.

I am now collecting material for the construction of a county map, and as soon as I can complete it, will likewise transmit you a copy of the same.

I cannot give you the exact area of this county in square miles, as I have not yet procured copies of the township plats, but suppose that the following estimates will be found nearly correct:

Of agricultural land about one hundred and eighty square miles. Of this the greater portion is well adapted to the growing of grains and vegetables, and in sheltered localities, I think will do well for fruit trees. Of grazing land, mostly mountainous, about one hundred and fifty square miles.

TIMBER.

The remainder, being about two hundred and fifty square miles, is only valuable for its timber and minerals. Much of the timber lies near the coast, is easy of access and of good quality; consisting of pine, fir, red-wood and oak.

MINERAL LANDS, GOLD, QUARTZ, ETC.

I cannot state correctly the extent of mineral lands which this county contains. Gold is known to exist throughout an area of at least twenty square miles. The placer, or surface diggings, as yet have given but a small yield; not more, on an average, than two dollars per day to the hand. One quartz vein has been discovered and partially opened, and is perhaps equal in richness to the best in the State. This vein lies about three miles north-westerly from Santa Cruz; runs nearly north and south, and has a dip of thirty degrees to the west. The length of the vein has not been prospected. The quartz is rotten and easily worked, and the gold very fine and disseminated throughout the rock. How extensive and valuable these veins will prove can only be ascertained by future working and examination, but as the embedding rocks, and all the attending characteristics, are similar to those found in other mining portions of the State, we may reasonably suppose that they will yet become a source of much profit.

Limestone is abundant and of good quality on the slope which faces the bay, and lime has already become one of our leading articles of export.

Good grindstone quarries are found on the line which separates this county from the County of Santa Clara.

The agricultural and other statistics will be furnished to you by the County Assessor, who has had better opportunities for procuring them than I have.

ROAD SYSTEM.

I did not receive a copy of your last Annual Report, and cannot, therefore, offer any suggestions in regard to your proposed Road System.

The Road Laws passed by our Legislature at its last session, I think have the same objections as the Road Laws heretofore in force. The tax of five cents on the one hundred dollars worth of taxable property is altogether insufficient in this county, and the tax of four dollars, which the Board of Supervisors have the

power of levying on each person liable to pay road tax, is unjust certainly and unequal in its operation. It will perhaps do for the mining counties, but in this county the advantages are all on the side of the property holders, whose lands are increased in value by their proximity to good roads, while the tax which they pay is but a trifle in comparison to the advantages which they derive. If the latter tax were reduced and the property tax increased to ten instead of five cents, the law would give more general satisfaction at least. I know the objection to this would be, that property is already sufficiently taxed; and so it is, but as the law now stands a Board of Supervisors can tax or not tax at their discretion; or else levy the individual tax and omit the property tax altogether, as they have done in this county. The consequence is, that up to this time there has been no work done on the roads under the last law.

Very Respectfully,

THOMAS W. WRIGHT,
Surveyor Santa Cruz County.

OFFICE OF COUNTY SURVEYOR,
November 20, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

Having recently entered on the discharge of the duties of my office, I am unable to make more than a meager report. The only surveys made in this county of a public character, during the past year, are those made by the U. S. Surveyor, in sectionizing the public lands, therefore I have no data to furnish which will aid in compiling material for a map of the State. The present map of the State I conceive to be incorrect in many respects.

IMPROVEMENT OF SACRAMENTO RIVER.

The Sacramento River is the only navigable stream in this county, and runs nearly through the center, from north to south. It is navigable as far up as Red Bluffs, for light draft boats throughout the entire year, which, however, was not the case until the present year, when the California Steam Navigation Company cleared that portion of it between Red Bluffs and Colusi, of snags, which enabled them to run one of their boats to the former place during the lowest stage of water. That portion of the river between Red Bluffs and the mouth of Clear Creek, a distance of about forty miles, is susceptible of being made navigable at all seasons, by a comparatively small expenditure; the channel being narrower, is deeper than that below; there are but very few snags in it, the greatest obstruction being the rocks in that part of the river known as the Iron Cañon. A small appropriation would be sufficient to render this forty miles of river navigable during the entire year, the benefits of which would be beyond calculation to the citi-

zens of the northern portion of the State. The plan for the improvement of this part of the river which was agitated in the last Legislature, viz: that of granting the exclusive right of navigating it for a series of years, to certain individuals, I conceive to be impolitic, and I think it would be far better for our Legislature to await an appropriation from Congress than to grant such a charter.

ROAD SYSTEM.

The roads of this county are under the supervision of the Board of Supervisors, and are generally in very bad condition, but very little improvement having been made by the present tax. I concur with you in your proposed road system, and am fully satisfied that the present system will never be productive of good roads.

IMMIGRANT ROAD—NOBLE'S PASS.

While on the subject of roads, I would beg leave to mention the Immigrant Road across the Sierra Nevada Mountains, known as Noble's Pass. This road comes into the Sacramento valley near Fort Reading. It leaves the Humboldt River near the Great Meadows, and the only desert of any length is easily crossed in one day. The ascent in crossing the mountains is so gradual that the traveler scarcely perceives it, and the grade is equally gradual in the descent. There is no scarcity of grass or water on the entire route, except on the desert already alluded to. I think our next Legislature would do well to give this route some attention, as it is beyond all doubt the most feasible for a stage road or railroad across the plains, of any other that crosses the Sierra Nevada Mountains.

TIMBER.

The timber of this county is oak, cottonwood and sycamore in the valleys, and pine, fir, spruce, cedar and manzanita in the mountains. Good timber can be had only by going to the mountains, from which place all the lumber for building and fencing is procured.

TIMBERED LANDS.

It occurs to me that it would be good policy to have these timbered lands surveyed and brought into market as other lands, in order that those engaged in the lumber trade might make themselves secure from trespassers, for these lands within a few years will not be inferior in value to the agricultural districts.

GOLD.

Gold is found in nearly every portion of the mountainous districts of this county.

MINERAL SPRINGS.

There is quite a number of mineral springs in this county, about eight miles north-east of Red Bluffs. Some of these springs are salt, some sulphur, while others are so tinctured with various mineral substances that it is very hard to

decide which predominates. Several of them emit gas which easily ignites, and burns until put out. The proprietor uses the gas to boil the salt water. The water of one of these springs is said to possess rare medicinal qualities, by several medical gentlemen who have tested its virtues.

DITCHES.

There is quite a number of ditches in this county, for the supplying miners with water. The largest of these is the Clear Creek Company, whose ditch is thirty-three miles in length, and capable of carrying one hundred sluice heads of water. It is nearly completed, and will furnish water for the employ of more than one thousand men.

SWAMP AND OVERFLOWED LANDS.

There is very little land in this county which can properly be denominated swamp or overflowed land. The only lands at all subject to overflows, are those lying along the Sacramento River and its tributaries, and are so detached, and in such small parcels, that I have no means of ascertaining the number of acres.

For the statistics of this county I refer you to the Report of Assessor Hughs, of this county, a summary of which is herewith inclosed.

Respectfully your
obedient servant,

A. H. STOUT,
Surveyor Shasta County.

County Surveyor's Office,
Yreka, Sept. 22, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

There are about 100,000 acres of land lying in this county, and there are about 25,000 acres of that which are tule and overflowed, about half of which can be reclaimed; some of it at a reasonable expense. The remainder, 75,000 acres of land, is highly productive.

None of the land has been townshiped or surveyed by the United States Surveyors.

THE MINES.

The gold mines in Siskiyou County are paying a reasonable income. The creek and river mines have paid better heretofore than dry or deep digging, but

there has been a great deal of investigation made in the mining business, and the gold has proven to be extensive in the deep diggings; and the whole of the miners average about four dollars per day to the hand.

CONCERNING THE FIVE HUNDRED THOUSAND ACRES OF LAND GRANTED TO THIS STATE; ALSO THOSE GRANTED FOR EDUCATIONAL PURPOSES.

There are about 30,000 acres of land in Siskiyou County covered by, or taken up, under the pre-emption law; and about three-fourths of it will be government land when surveyed by the United States Surveyors, and the other fourth will be State lands.

There have been four school land warrants located in this county. No. 661 (160 acres) and No. 658 (160 acres), granted to Daniel S. Roberts; and No. 646 (160 acres), granted to F. H. Wood, were all located by S. Oldham, in Shasta Valley, (granted to D. D. Colten); also No. 219 (320 acres) was located by P. A. Hartstrand, in Scott Valley.

There are no Mexican Grants lying in this county.

CONCERNING THE AGGREGATE QUANTITY OF STOCK AND PRODUCE OF THE STATE IN THE COUNTY.

	No.
Horses	1,000
Cattle	3,000
Hogs	1,500
Mules	2,500
Sheep	200

	Acres.
Wheat—60,000 bushels; twenty bushels to the acre	3,000
Barley—24,000 bushels; " " "	1,200
Potatoes—60,000 bushels; one hundred bushels to the acre	600
Oats—37,500 bushels; twenty-five bushels to the acre	1,500
Onions	200
Corn	250
Beans	200
Vegetables	1,000
Fruit trees	500
Total amount in cultivation	7,950
Under fence for grazing purposes	20,000

FERRIES, BRIDGES, ETC.

There are five ferries and one toll bridge in this county.

There is one canal about completed eighty miles long, four feet wide in the bottom, 6 feet wide at the top and two feet deep.

This canal is taken from the Shasta River west of the Shasta Butte and leads water on to the Yreka and Hawkingsville Mines, and this canal will cost about $200,000.

There are also many other small canals or ditches in this county to lead water into the mines.

THE MINES

Are very extensive; in fact, the mining region extends over the larger part of this county. Gold has been found on all the streams in this county. It has been found in abundance int he eastern part of this county; on the Sacramento, Pitt and McCloud Rivers, in rich and extensive deposits; and then in the northern part of the county on the Klamath, Scott and Shasta Rivers it has been found to be very rich and extensive.

There are a great many quartz leads in this county that pay from six to fifteen dollars to the tun. Some of them have been worked, but it was at a time when machinery could not be had that was competent to do the work with—(crushing quartz. But the time is near at hand when there can be machinery conveyed into this county to do any kind of work with, and then the quartz mills will be extensive and pay well.

ROAD FROM YREKA TO RED BLUFFS.

There are several public highways or wagon roads in this county, but we have no public highway or wagon road leading from Yreka to the Sacramento Valley or to the Seat of Government; but there is a route which has been reviewed, (I have been over the greater part of it myself,) and the part which I have been over is a good and practicable route for a wagon road, and the balance of the route, I have been told by responsible men, is also good and practicable; and the whole length of the road from Yreka City to Red Bluffs on the Sacramento River, is about one hundred and sixty miles. And there is plenty of water and grass the whole extent of the route, with a little exception in one or two places of about sixteen or eighteen miles in length. There have been some wagons and teams which have gone from Red Bluffs to Yreka with heavy loads, and if the road was located and some work done on it, in a short time we would have a good road from Yreka City to Red Bluffs. We have a road leading from Yreka City to Oregon, and if we had a good road leading from Yreka City to Red Bluffs, then there would be a road leading through the whole extent of the State of California and the Territory of Oregon; and it would be a very great advantage to this part of the State if we had a road of said dimension from Yreka City to Red Bluffs.

Respectfully,
Your obedient servant,

E. M. STEVENS,
Surveyor Siskiyou County.

Benicia, Sept. 30, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

I now proceed to make my final report on the subjects embraced in your circular:

LANDS.

	Acres.
The whole amount within the county boundaries will be equal to about	535,000
Swamp lands, about	90,000
Subject to overflow, about	35,000
Valley lands, about	280,000
Mountain and hill lands, about	150,000
Suitable for tillage, about	175,000
Suitable for grazing, about	280,000
Cultivated this season, about	16,500

	Acres.	Yield.
Planted in Wheat	7,500	150,000 bush.
" Barley	5,200	156,000 "
" Oats	700	28,000 "
" Corn	700	21,000 "
" Potatoes	200	30,000 "
" Broom Corn	125	
" Onions	50	500 tuns.
Mowed for Hay, about	4,000	6,000 "
Planted in other crops	25	

There are three flouring mills in the county; two are driven by steam, and the other alternately by water and steam.

There have been four artesian wells commenced, but no one has yet been completed. That commenced at Benicia by the Pacific Mail Steamship Company, has been sunk about three hundred feet, but the work is now suspended, and has cost upwards of $6,000. It was began on the tule in front of the hill, and for the first one hundred feet passed through a blue clay, the other two hundred feet was mostly through hard limestone rock, but had some veins of clay, pebbles and sand.

The one commenced on Mare Island, by the Government, has been sunk about one hundred feet, and obtained an impure, sulphury, water.

The one commenced at Suisun City has been sunk about three hundred and sixty feet, much of the distance through a blue clay, and have obtained some good water in sand and pebbles; it comes within about three feet of the surface; it is still progressing.

The one commenced by A. P. Jackson, Esq., is sunk about one hundred and sixty-five feet, mostly through a stiff clay. The work is now suspended, but to be resumed at an early day.

STOCK.

I estimate the stock as follows:

	Head.
Horses	3,000
Cattle	24,000
Sheep	18,000
Hogs	17,000
Goats	200
Mules	300

Value of animals slaughtered, $100,000.

On the subject of the county boundary I would say, that something should be done before January 1, 1857, as a number of persons within this county have been assessed in the adjoining county, and thereby subjected to pay tax in both counties.

The Act passed at the last session of the Legislature, defining the boundaries of Napa County, has dismembered a portion of our county and connected it with Napa, without any plausible reason, which our Member of Assembly ought to have prevented. The said Act begins with the Napa line at the mouth of Guichica Creek, and runs due east until it arrives at the mountain separating Suisun from Napa Valley,—which line may circumscribe the globe but will never touch the mountain referred to; thence along the top of said mountain until it intersects the southern boundary of the Chermilles Grant, and as this grant has never been located, this point is very indefinite; thence easterly along the southern boundary of the grant until it arrives at the top of the mountain separating Vacca and Napa Valleys; this line might strike Kamskatka but could never strike the mountain referred to.

As a substitute for the present boundary I would recommend that it begin at the point designated in the original law, the point where Suscol Creek enters Napa Creek, and running up the said Suscol Creek until it meets the foot of the mountain; thence in a direct line to the corner of townships five and six, north of ranges two and three, west of the Mount Diablo meridian; and thence due north to Puta Creek; and thence down said creek to the point where the South Fork of said creek intersects the line between ranges two and three east; and thence due east one mile, to the Sink of Puta; and thence due south until it intersects the Sacramento River, which will be near the mouth of Cache Slough; thence down said river to Suisun Bay; thence through the Straits of Carquines to the San Pablo Bay; thence up the said bay to the mouth of Guichica Creek; and thence in a direct line to the place of beginning. These lines will suit the people and the officers of the different counties better than any other that I can suggest. The lines necessary to be run then will be about thirty miles.

On the second subdivision of your circular, I would suggest that a very valuable improvement in the internal navigation of the State may be made, and thereby the development of the resources of the State will be materially promoted by cutting a canal from the Sink of Puta Creek to the Sacramento River, which I think does not exceed eight miles, and then by a series of locks, so as to secure a slack water navigation to the foot of the mountain—a distance of about twenty miles in a direct line. The inclination of this valley from the mountain to the tule, I think, does [not?] exceed six or seven feet to the mile. The advantages to be gained by this improvement is to drain a very considerable amount of the overflowed land lying in the vicinity of the proposed canal, to create a water power for the manufacture of flour and other articles, and to convey cheaply to the market the products of this extensive and fertile valley. It is estimated that near

a thousand tuns of produce is now annually transported to Sacramento City, at a cost of not less than ten dollars per tun, and that this quantity of produce may be increased one hundred fold in that vicinity; the transportation on this improvement could not exceed two or three dollars per ton. The manufacturing of flour by steam power is always a very expensive one, and in this country, where fuel is scarce, must ever continue to be a heavy drawback on the profits of the farmer. The Dry Dock Company at Mare Island have a dredge, or excavator, the original cost of which is about $15,000, and can be worked at an expense of twenty-five dollars per day, and can excavate three hundred cublic yards of earth daily. There would not be more than 250,000 cubic yards to excavate in the construction of this canal, and the expense need not exceed $75,000. I am not prepared to make an estimate of the construction of the locks, but at all events the water power will pay for them.

Please excuse my delay in making this report, as it was not in my power to obtain earlier the information necessary.

Yours, etc.,

H. PATTON,
Surveyor Solano County.

Nicolaus, Sutter, Co.,
October 26, 1855.

To the Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with the tenth section of "An Act concerning the office of Surveyor-General," passed April 17th, 1850, and in pursuance of your "Circular to County Surveyors," of July last, I have the honor of respectfully submitting the following report:

SUTTER.

Sutter is exclusively an agricultural and grazing county. Its area is about 400,000 acres, two-fifths of which would be considered overflowed and swamp, or tule lands. One-fifth of this could, with comparatively little expense, be reclaimed, and made fit for agricultural purposes, but nearly the whole county is supposed to be covered by Mexican grants, which have not been segregated from the public domain yet, so that it is very unsettled how much of these lands will belong to the State. It would have been very desirous for me, if I had had the township plats of the United States surveys. Portions of the remaining three-fifths lands adapted to agriculture, are in a flourishing state of cultivation, notwithstanding the impediment of the uncertainty of land titles, and it does not require a great prophetic eye to foretell that Sutter County will, in the course of a few years, be one of the wealthiest in the State, for its rich alluvial soil is unsurpassed, and its relative position to the mines will insure a lasting home market

for its stock and produce. Wheat, barley, oats and corn, the principal grains raised, yield abundantly. The blighting rust injured wheat some this season, but not near as much as in the valleys adjacent to the coast and bays. Potatoes, onions, cabbage, and all other vegetables, are profitably raised.

Little attention, with the exception of Gen. Sutter and a few others, heretofore has been paid to the culture of fruit and ornamental trees, grapes and garden fruits, but from the successful experiments that came under my observation, a brighter future is hailed to Sutter County, in making it paradisiacal for the future home of a large and prosperous population.

Internal improvements have not been made yet, but it is to be hoped that the people will direct their attention toward throwing up embankments, serving as levees, whereby large tracts of lands could be brought within the reach of the plow, building turnpikes and improving the roads in general, so as to make them more passable through the rainy seasons.

The boundaries of this county, with the exception of the natural one of the Sacramento and Feather Rivers, are open and undefined. The easterly, or joint boundary with Placer County, runs from a point on the Sacramento, ten miles below the junction with Feather River, in a northerly direction, to a point on the east bank of Bear Creek, opposite "Camp Far West," frequently cutting farms diagonally. This line has once been surveyed in 1851, but as there is not timber on it, and the surveyors left no marks, it would have to be surveyed again. The northern, or joint boundary with Butte County, runs from a point on the west bank of Feather River, opposite the mouth of Honcut Creek to the north point of the Three Buttes, thence due west to the Sacramento River. This line has never been surveyed, and will also at times run diagonally through farms.

It is apparent that these arbitrary lines are not as conveniently and permanently defined, not so generally known by the citizens at large, and will not consolidate the counties as well as the lines of the United States surveys, and as the United States Surveyors have sectionized contiguous to both of these boundary lines, it is generally hoped that the next Legislature in their wisdom will see fit to substitute for the northern and eastern boundaries of this county, the lines of the United States surveys.

That part of the joint boundary with Yuba County, defined by Bear Creek, from the mouth of the same, up to a point opposite Camp Far West, it is true, is defined by a natural boundary, yet it does not seem to meet the wishes of the people for many reasons, particularly for one in regard to the successful organization of Common School Districts. There is but a narrow belt of arable land on both sides of Bear Creek, intervened on both sides by high and barren plains from other settlements, and the inhabitants on one side alone live too scattering apart to have that very necessarily required institution of a good school organization, and as the citizens of the Yuba side have for the last two sessions of the Legislature unsuccessfully petitioned the same, praying to be annexed to Sutter County, I consider myself justified—having possibly gone beyond my proper sphere—to recommend very respectfully the substitution for Bear Creek, a line of the United States surveys, that would satisfactorily meet the wishes of the citizens.

I remain,

Very respectfully yours,

PHIL. E. DRESCHER,
Surveyor Sutter County.

Washington, Yolo Co., Nov. 15, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In reply to your circular to County Surveyors, of July 16, 1855, I have to say, that in reference to many of the subjects mentioned therein it will be utterly impossible for me to transmit to you any information that will even approximate to accuracy; still, in accordance with your request, I will endeavor to embody some little data relative more particularly to those matters in this county brought under my professional observation.

BOUNDARIES OF THE COUNTY.

The boundary lines of this county have never been defined by any legal survey, although it is of very great importance that they should be so defined, not only on the score of revenue, but that citizens of the various counties may render themselves secure in their property.

The north line of the county, that is, the dividing line between Yolo and Colusi, is simply an imaginary one, that cannot be ascertained without a survey; its length is about thirty-five or forty miles, and should by all means be surveyed at as early a period as possible.

A portion of the southern line is described as being a direct line from the sink of Puta Creek to the head of the Merrit Slough. This line is nearly a north and south course, and would, I think be much better if it should be declared upon one of the township lines, according to the United States survey, due north and south, as recommended by Mr. Patton, County Surveyor of Solano; this would have the advantage of not cutting up and dividing farms in the manner the present line does, and would definitely settle its locality, greatly to the advantage of both county governments and citizens; this line would be about thirty miles in length, and it is of the utmost importance that it should be permanently located at the earliest practicable opportunity.

SWAMP LANDS.

There is within this county a very large body of swamp and overflowed lands that, owing to the provisions of the law of the last session of the Legislature, providing for the sale of swamp lands, is excluded from sale, the result of which has been very detrimental to the best interests of the county. We have a frontage upon the Sacramento River, by the course of the river, of nearly, or quite, one hundred miles; the entire of the banks of the river during this distance are subject to annual overflow. A strip of land, however, immediately upon the bank, and varying from one-quarter to one mile in width is, however, tillable, (after the overflow has subsided,) nearly every year. This land is very generally settled upon, being laid out and claimed in tracts of one-half mile square, reaching back into the tule, as a general rule. Very many of these claims are very considerably improved by being fenced, leveed and cultivated. I am well convinced that if the State would convey to these settlers its rights to their possessions for a fair and equitable consideration, but a very short time would elapse before the entire of

the Sacramento River front of this county would be securely leveed and protected from the rise of the waters of the river, thus vastly increasing the taxable wealth of the county and State, as well as, at the same time, increasing in our midst a community, lords of their own soil, who, sitting under their own vine and fig tree, and having a permanent abode and interest with us, would be the best and safest safeguard of our political and moral interests, rights and liberties, and would vastly add to our standing and reputation both at home and abroad, as a permanent, prosperous, moral and law-abiding people.

This land is of unsurpassed fertility, and when once properly reclaimed and brought into cultivation, will furnish constant and remunerative employment for a large body of industrious and permanent citizens. The pecuniary benefit of the sale of these lands would go still further; it would not only give a certainty as to title, and consequently encourage permanent settlement and improvement thereon, but each settler upon the river bank would be willing and anxious to purchase, and ultimately reclaim the tule lands immediately back of, and adjoining to, him; thus procuring, not only the disposal of, but the permanent improval and reclamation of land which would otherwise surely remain forever a useless waste; and further, were the overflow of the river itself restrained, it would be comparatively an easy task to dispose of the surplus waters of Cache and Puta Creeks, by means of which nearly the whole of this vast body of now swamp lands might be brought into the highest state of cultivation and improvement.

It is impossible for me to state, with any approach to accuracy, the amount of these lands, but they must embrace a tract of at least fifty miles in length by from four to six miles in width.

The amount of land in this county under cultivation is proportionately large, but I am not able to state the exact amount. The principal crops raised are wheat and barley. The wheat crop of the county has averaged thirty bushels to the acre; the barley crop thirty-five bushels per acre. Oats have proved a light crop during the last season, and but little sown. But little corn planted, which has, however, yielded well.

Upon the river lands there has been a large amount of sweet and Irish potatoes, cabbages, melons and vegetables of all description, raised, and the farmers upon these lands during the past year have generally been very successful in both the raising and disposal of their crops.

There are many young orchards, comprising the best varieties of apple, peach, pear, plum, fig, cherries and other fruits planted, which are all doing finely.

There are several vineyards in the county which, although only about three years old, are proving very lucrative. The number of vineyards in the county are constantly increasing.

More attention is gradually being paid to general farming, and less to stock dealing, in the county. The quality, however, and consequently the value, of the stock is greatly increasing.

We only need a final settlement of our land titles to make our county the garden of the State, as well as its granary.

Messrs. Tufts & Lewis have just completed the erection of a turnpike road across the tule, three miles above Washington. The county is erecting another still higher up, and Mr. Jonathan Williams below, all of which will bring the back part of the county into closer proximity to market, and to a great extent do away with the difficulty hitherto experienced in reaching the river in the winter time.

I have already forwarded to you the amount of swamp lands taken under the Act of last winter.

If I had not been so greatly occupied with many important matters, I would

have been glad to have made a much fuller report than is at present possible, and must, therefore submit the foregoing.

Yours, etc.,

WM. MINIS,
County Surveyor Yolo County.

APPENDIX E.

1. CIRCULAR TO, AND REPORTS FROM, COUNTY ASSESSORS.

CIRCULAR TO COUNTY ASSESSORS.

SURVEYOR GENERAL'S OFFICE.
Sacramento, March 1, 1855.

SIR:

I respectfully call your attention to the duties of your office in connection with that of the Surveyor-General.

From "An Act Concerning the Office of Surveyor-General," passed April 17, 1850, I extract the following:

"SEC. 9. He shall deliver to the Governor annually, on or before the fifteenth day of December, his report, which shall contain—

2. Plans and suggestions for the improvement of the internal navigation of the State, and for the construction and improvement of roads, turnpikes, railroads, canals and aqueducts; also, plans and suggestions for the planting, preservation and increase of forests of timber trees, for the draining of marshes, prevention of overflows, and the irrigation of arable lands by means of reservoirs, canals, Artesian wells, or otherwise.

3. An estimate of the aggregate quantity of land belonging to the State, and the best information he may be able to obtain as to the characteristics of the same.

4. An estimate of the aggregate quantity of all lands used for or adapted to tillage and grazing within this State and each county of the State, together with a description of the locations in which the same may be situated.

5. An estimate of the aggregate number of horses, cattle, sheep and swine within the State, and each county of the State.

6. An estimate of the aggregate quantity of wheat, rye, maize, potatoes, grapes and other agricultural productions of the preceding year, together with his views as to the presence, cause and remedy of any disease or other mischief preventing a full and proportionate return and increase of the same.

7. An estimate of all mineral lands within the State, and each county of the State, and the quantity and value of each mineral produced during the preceding year, together with a description of the localities in which such mineral may be found.

8. All facts which may be within his personal knowledge, or which he may learn from reliable sources, and which may, in his opinion, be calculated to promote the full development of the resources of the State.

Sec. 10. He shall address a circular letter to the County Surveyors and County Assessors, instructing them, and it is hereby made a part of their official duties, to use their utmost diligence in collecting information relative to each and every matter mentioned in the ninth section of this Act, and to transmit to him, quarterly, at the Seat of Government, a report in writing setting forth the result of their inquiries.

Sec. 11. He shall, with his annual report, transmit to the Governor all reports which he may have received from his deputies, as mentioned in the tenth section of this Act."

A careful examination of the sixth and eighth sub-sections will satisfy you that I am authorized and required to call upon you to "use your utmost diligence in collecting information relative to each and every matter mentioned" below, as I consider the same as "calculated to promote the full development of the resources of the State."

Lands.—Agricultural, mineral, swamp, overflowed, subject to overflow, adapted to tillage, grazing lands.

Timber.—Oak, pine, red-wood, etc.

Acres and bushels of wheat, barley, rye, oats, Indian corn, buckwheat, peas, beans, Irish potatoes, sweet potatoes, turnips, beets, parsnips, carrots, onions, clover and other grass seeds, flax seed, etc. Melons, cabbage, pumpkins, etc.

Acres and tuns or pounds of hay, flax, hemp, sugar, rice, tobocco, cotton, etc.

Pounds of wool, beeswax, honey, butter, cheese, value of eggs, etc.

Fruit Trees.—Apple, peach, pear, plum, cherry, etc. Number and age, acres, amount of fruit.

Vineyards.—Vines, grapes and wine.

Live Stock.—Horses, mules, asses.

Neat Cattle.—Oxen, milch cows, calves, etc. Sheep, goats, swine, etc.

Value of animals slaughtered, value of poultry, etc.

Internal Improvements.—Canals, turnpikes, railroads, electro-magnetic telegraphs, etc.; length, original cost, cost of repairs, income, profits, etc. Incorporated bridge companies, toll-bridges, ferries, etc.; amount of stock or cost, income, etc. Artesian wells; number, depth, cost, discharge, kind and thickness of strata bored through, etc.

Steam and other Grist and Saw Mills.—Kind and amount of grain ground, run of stone, amount of flour, meal, etc.; kind, amount, cost and value of lumber; original cost, expense of running, profit, etc.

Quartz Mills and Mines.—Cost, value, etc.; tuns of quartz crushed, cost and yield per tun.

Manufactures.—

[Any meteorological tables or observations—in short, *all important facts* you may be able to obtain will be very acceptable.]

I repectfully request, as far as possible, the statistics of both the preceding and present years.

I will be obliged to you for any suggestions for the improvement of the boundaries of your county, by substituting *natural* for *artificial*, [arbitrary], or the lines of the *United States Surveys* for the present lines, or any other changes with a view to a better and more permanent sub-division of the State.

Please state the number of miles of boundary of your county necessary to be run prior to January 1st, 1857.

Your last report for this year should reach me by the first of November next,

that I may avail myself of its contents in making out mine, which must be transmitted by the 15th of December.

I would respectfully urge upon you a careful examination of this circular, and a strict compliance with its requirements.

Please write upon but one side of the paper.

From "An Act Concerning the Office of County Assessor," passed March 27, 1850, I extract the fellowing:

"Sec. 5. If any Assessor shall, by himself or deputy, be guilty of any neglect of duty enjoined on him by law, the Court of Sessions may make such deduction from his account for services rendered, as they may deem just and reasonable, and shall, moreover, be liable to indictment, in any court of competent jurisdiction, and fined in any sum not exceeding five hundred dollars."

In view of the great importance of having correct statistics of the State, also of the fact that scarcely a single Assessor sent in a proper report during the last year, I beg leave to state that the person or persons whose duty it may be to audit your accounts, will be urgently requested to co-operate with me in effecting a strict compliance with the law in this respect.

Please acknowledge the receipt of this immediately and oblige,

Very respectfully,
Your obedient servant,

S. H. MARLETTE,
Surveyor-General.

To ——— ——— Esq., County Assessor ——— County.

Office of County Assessor,
Sept. 22, 1855.

S. H. Marlette, Surveyor-General:

Sir:

Herewith, you will please receive our report of the agricultural products, live stock, etc., of this county for the current year, ascertained as near as may be, from inquiry and observation, to which we have given particular attention since the receipt of your circular, which was not until our work of assessment was somewhat advanced. Any further communication you may please to make to C. C. Breyfogle, Assessor of Alameda County, at Alvarado, will be thankfully received and shall receive prompt attention.

Respectfully yours, etc.,

C. C. BREYFOGLE,
Assessor Alameda County.

By R. P. Ranny,
Deputy.

Agricultural Products, Etc., of Alameda County for 1855.

NAMES.	Acres.	Average Yield.	Aggregate.	REMARKS.
Wheat	20,000	23 bush.	460,000 bush.	Damaged by rust,
"	1,938	Rusted.	Not cut.	smut and shrink-
Barley	13,704	55 "	753,720 "	age.
Oats	9,637	50 "	481,850 "	Crop not well filled,
Rye	15	25 "	375 "	weighs light, esti-
Buckwheat	176	75 "	13,200 "	mate is by weight.
Potatoes	4,514	75 "	338,450 "	Damaged by worm.
Indian Corn	412	40 "	16,480 "	Used green on table
Cabbage	206			
Onions	99			
Beans	895			
Peas	135			
Beets	45			
Turnips	68			
Cucumbers	80			
Tomatoes	27	25 tuns.	675 tuns.	
Carrots	20			
Garden Veg's, various	600			
Strawberries	27	1,500 lbs.	40,500 lbs.	Vines 1 yr. old, gen.
Hay	2,700			Supposed.
Apple Orchard	229			
Peach Orchard	72			
Vineyard	34			
Nursery	91			
Hedge, $2\frac{3}{4}$ miles				
Total acres	54,724			

Two Steam and one Water Flour Mills, having ten run of stones, capable of making 500 bbls. per day.

FRUIT TREES, ETC.

TREES.	1 yr. old.	2 yrs. old.	3 yrs. old.	4 yrs. old.	REMARKS.
Apple.....	15,676	24,131	9,450	410	
Peach *	28,834	15,215	2,200	200	Yield, 6,000 lbs.
Plum	1,199	2,511			
Fig.....	90	50			
Cherry	3,047	1,670			
Pear.....	3,780	1,000	45		Older number not known.
Quince	1,591	137			
Grape Vines .	24,780	23,200	7,500		
Nectarine....	800				
Apricot	1,700	300			
Currant	16,000				
Ornamental ..		30,000			Supposed.

* Seedlings of this year's growth, 43,000, generally budded; not all enumerated.

LIVE STOCK.

	No.
Horses	3,934
Colts	198
Mules	945
Jacks	50
Cows	3,432
Calves	2,061
Stock Cattle	11,218
Work Cattle, yoke	517
Sheep	8,306
Goats	482
Hogs	4,641
Hens	17,447
Turkeys	519
Ducks	628
Geese	170

BUTTER, CHEESE, ETC.

Butter, pounds	133,390
Cheese "	100,000
Wool "	24,918
Eggs, Hens, dozens	79,682
" Turkeys, "	530
" Ducks "	1,570

County Assessor's Office,
Jackson, Oct. 25, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with your Circular, addressed to the County Assessors of this State, I beg leave to submit the following report of statistics of Amador County, for the year 1855:

LANDS.

On a careful investigation I find claimed for agricultural and grazing purposes, 34,333 acres of land, of which amount 4,529 acres are in actual cultivation.

GRAIN.

Acres in wheat, 1,006, which yielded at the harvesting of the same, 26,980 bushels. Acres in barley, 1,195, yielding 29,375 bushels. Acres in oats, 828, yielding 18,740 bushels. Acres grass, 1,200, yielding 1,700 tuns hay. Acres vegetables, 300, embracing every variety produced in this portion of the State.

FRUIT.

Apple trees from one to two years' growth	927
Peach trees " " "	1,458
Grape Vines " " "	4,730
Other fruit trees, including pear, plum, cherry and apricot	100

In connection with the above I would remark, that the greater portion of the cultivated lands in the county are embraced in Ione, Dry Creek and Jackson Valleys; the first named being about five miles in length with an average width of about three miles, and formed by the delta of Sutter, Mule and Dry Creeks. The valley is surrounded by ranges of hills. Its soil is very rich and productive, being mostly composed of the vegetable mould and the *debris* from the surrounding hills. This valley is well adapted to the production of all the several grains peculiar to the State, and indeed in all vegetable products of the county gives a prolific return to the labors of the husbandman.

The farmers of this valley are now to some extent turning their attention to the production of fruit, and so far as experience has tested its adaptation to this branch of industry and thrift, give satisfactory evidence of future abundance in all the varieties of middle and northern California. The same remarks will equally apply to Jackson and Dry Creek Valleys, both peopled with an enterprising, industrious and thriving population.

LIVE STOCK.

	No.
Horses	535
Mules	175

	No.
Asses	88
Neat Cattle	240
Work Oxen	453
Milch Cows	630
Yearlings and Calves	480
Sheep	934
Hogs	2,550
Goats	150
Total Live Stock	6,235

SAW MILLS.

There are within the county fifteen saw mills—nine driven by steam and six driven by water power; original cost of construction, $100,000; number of hands employed, about one hundred; average wages and board per month, sixty dollars. These mills are capable of manufacturing 9,850,000 feet of lumber, in the aggregate, per annum, at an average value at the mills of thirty dollars per 1000 feet,

Equal per annum to the sum of	$295,500
Expenses per M in manufacturing, $20	197,000
Net profits per annum of 15 mills	$98,500

The timber used principally in the manufacture of lumber is the different varieties of pine peculiar to the mountains of this State.

GRIST MILLS.

One steam grist mill situated at Ione City, and one water grist mill on Indian Creek, driving two pairs of burrs each; original cost of the two mills, $14,000, employing about seven hands. Within the past year these mills have manufactured—

	Pounds.
Flour	516,000
Barley for Feed	100,000
Indian Meal	50,000
Total	666,000
Receipts for Grinding	$6,660
Expenses	4,995
Net Profit	$1,665

The above mills for the past year have not been employed above half their time owing to a scarcity of grain, which perhaps will not be the case in other years; and hence, if constantly employed, would pay at the above figure, a good interest on the original cost.

QUARTZ MILLS.

Within the county are thirteen quartz mills, driving one hundred and thirty stamps; eight of said mills are worked by water and five by steam.

I have only been enabled to obtain reliable statistics from six of these mills, as follows:

Amador Creek.—Spring Hill, Amador and Keystone.

Sutter Creek.—Amador No. 2, Eureka and Badger.

These six mills employ one hundred hands in the various branches of their operations, and use about fifty stamps.

The amount of quartz rock crushed per annum, in the aggregate, by these mills is 18,000 tuns, at an average yield of $15 per tun....	$270,000
Aggregate expense attending the above six mills, including every expense, per annum	133,000
Net proceeds.....	$137,000

I doubt not a number of other mills in the county are doing equally well; and so far as the problem of quartz operations in this county has been elucidated it has established the fact, that capital can seek no better or safer investment than the quartz of Amador, for sure, permanent and ample returns. Amador abounds in quartz ledges or veins penetrating her mountains and hills in every direction, and only requires capital and industry to make this county the most productive in the State in this branch of mining.

CANALS, DITCHES AND WATER RACES.

Thirty companies in this county are engaged in distributing the waters of various streams, by means of canals, ditches, races and flumes. Three hundred miles of canal ditches and flumes have been constructed at an average cost of $450,000, the principal lines being, first:

Jackson Water Company Canal.—Water taken from the North Fork of the Mokelumne River, Tiger and Antelope Creeks. Size of canal, six and a half feet at the top, four feet on the bottom, and two feet in depth, capable of conveying one hundred sluice-heads of water, equal to 2,000 cubic inches. This canal is one continuous plank flume; present length, including all its branches completed, thirty miles, supplying water to the southern part of Volcano and the rich mining locality of Aqueduct City, and ultimately will be conducted to the mines of Jackson, supplying a rich and extensive mining country lying between Jackson and Aqueduct City, heretofore unworked for the want of water. When finished, this will be one of the most productive and valuable lines in the State, passing almost its entire length through a rich and inexhaustible mining region, it will furnish the means of working placer diggings, now idle for want of water, as well as motive power for quartz mills, saw mills, and machinery of any desirable description. Some of the aqueducts on this line are carried for many hundred feet at an altitude of ninety feet, exhibiting in its construction great mechanical skill and architectural beauty.

Volcano Mining and Water Company.—Water taken from the tributaries of the North Fork of the Mokelumne River, and intended to supply the mines of Volcano and other localities. This canal was commenced in August last, and has been pushed on by its proprietors towards completion with great rapidity, thirty

miles having been finished, and by the terms of existing contracts, the entire line, sixty miles, including all its branches, is to be finished by the fifteenth day of December next. This line is also of large dimensions, and will convey a noble volume of water, being seven feet at the top, two and a half feet on the bottom, and four and a half feet from top of the embankment, and capable, when full, of conveying eleven and a half cubic feet of water. This entire line will only require sixty or seventy rods of fluming, the canal following the high lands, or divide, between the waters of the Mokelumne and Cosumnes Rivers. From the altitude of the main trunk by lateral branches, its waters can be transmitted wherever a demand may exist, on either side. From the volume of water this line will be capable of carrying, it is in contemplation to erect saw mills and other machinery for manufacturing purposes along the line, using its water as the motive power. This line will also furnish water for driving quartz mills; and any amount of machinery may be driven by its waters, with but little or no loss, as the water, after being used at one point can be taken up and used to furnish power at another, and thus on through a vast round of useful and profitable employment.

Sutter Creek and Amador Company.— Water from Sutter Creek, twenty-five miles in length, and supplies water to the placer diggings along its line, as also motive power to several quartz mills, and this ditch to a certain extent exemplifies the great economy and many uses of a single head of water. A head of about sixty inches of water is taken from this ditch, and by means of a race is conducted on to an over-shot wheel, at the quartz mill of Messrs. Marden & Co., driving twelve stamps; from thence the same head is conveyed to the Herbertville Mill, at a lower altitude, where it drives a still greater number of stamps, and from thence conveyed to the wheel of the Keystone Quartz Mill, where it drives twelve stamps, and after leaving the last named mill is again taken up and on, to furnish placer diggings beyond.

Cosumnes Mining and Ditching Company.—Water from the South and Middle Forks of the Cosumnes River, a large and well constructed ditch, twenty-two miles in length, supplying the mines in the vicinity of Fiddletown; constructed at a cost of $30,000.

Willow Spring and Michigan Bar Company.—Water from the South and Middle Forks of the Cosumnes River, and terminating at Michigan and Cook's Bar, passing through Willow Springs and Arkansas Diggings, and supplying a rich and extensive mining country along its entire line. This canal begins in El Dorado County, passing through Amador, and terminates in Sacramento; entire length sixty miles, forty of which lie in Amador County; cost of construction about $130,000.

Prairie Water Company.—Water from the Cosumnes River below all its forks, beginning in El Dorado County, passing through Arkansas and Drummonsville, in Amador, and terminating at Katesville and the plains in Sacamento County; thirteen miles of the ditch is in Amador; entire length, forty miles.

The above are the principal canals in the county; twenty-four other ditches and races, varying from three to ten miles in length, take from the various streams within, and bordering the county, and supplying numerous mining camps along their lines and termini.

TELEGRAPHS.

A branch of the Alta Telegraph Line is now being constructed, starting from Sonora, where it intersects the line from Stockton and San Francisco, from thence to Mokelumne Hill, from thence to Jackson, thence to Volano, in this county; from thence to Indian Diggings, in El Dorado County, and connecting with the

Sacramento line at Diamond Springs. Total length in Amador County, twenty-five miles.

Very respectfully,
Your obedient servant,

H. A. EICHELBERGER,
Assessor of Amador County.

BIDWELL, Sept. 28, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

In compliance with the requirements of the ninth section of an Act concerning the office of Surveyor-General, I send you the following statistical report for this county:

	Number.
Wheat, acres	1,865
" bushels	46,625
Barley, acres	2,400
" bushels	72,000
Oats, acres	175
" bushels	5,250
Corn, acres (destroyed by grasshoppers)	18
Horses	1,588
Mules	376
Asses	27
American Cattle	9,726
Spanish "	2,250
Calves	1,350
Sheep	3,636
Goats	127
Swine	7,550
Flouring Mills, driven by water	2
Run of Stone, each	2
Saw Mills, driven by water	10
" " steam	4
Ferries	10

There is one incorporated bridge company now in the act of constructing a wire suspension bridge across the river at this point, with a span of two hundred and fifty feet and a width of eighteen feet in the clear. The capital stock of said company is $39,000.

The cultivation of fruit trees, vines, etc., is now beginning to attract the attention of the farmers in this county. On the rancho of Maj. John Bidwell, situated on Chico Creek, can be seen a fine vineyard, besides a variety of fruit and shade trees. He would have had a large amount of peaches this season had it not been for the uncompromising grasshoppers, for they took the majority of them before

they were ripe. The land seems to be very fertile in that section of the valley and well adapted to the raising of grain and fruit. The following is a list of fruit trees, vines, etc., on Maj. Bidwell's ranch:

Peach Trees, fruited	250
" in nursery	1,000
Apple Trees, "	100
Quince Trees, "	25
Pear Trees, "	100
Fig Trees, fruited	100
Grape-Vines, fruited	2,000
" in nursery	12,000
Tuns Grapes this year	12
Shade Trees—Yellow Locust, three years from seed, some of them six inches in diameter	500
China Trees	50
Alanthus	25

I have learned that some of the officials of Yuba County are inclined to dispute the boundary line between the two counties; they claiming the so-called North Honcut as the line, but by reference to the official map of the State (which is very correct, so far as the Honcut is concerned), you will see that the South Honcut is the one spoken of on the map, and that it leads to the dividing ridge spoken of as the boundary line in the statute.

Very respectfully,
Your obed't servant,

MILES CHAPIN,
Assessor Butte County.

Colusi, Oct. 3, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In obedience to the instructions contained in your circular addressed to County Assessors, allow me to submit the following report.

The number of acres of land in Colusi County, as near as I can estimate, is 1,792,000.

	Acres.
Mountainous Land	856,000
Valley Land	936,000
Claimed by Spanish Grants	241,845
Belonging to State	
Suitable for Cultivation	600,000
" Grazing	1,000,000
Under Cultivation	12,287

In Wheat	6,500
In Barley	5,287
In Oats	75
In Vegetables and Melons	125

	Number.
Wheat, bushels	101,050
Barley, "	94,066
Oats, "	1,500
Horses	1,604
Mules	262
Oxen	930
Cows	1,748
Mixed Cattle	8,132
Yearlings	1,387
Calves	867
Hogs	5,761
Sheep	4,122
Goats	4

Value of poultry, $4,500.

Kinds of Timber.—In the valley, oak; in the mountains, oak and pine.

Fruit Trees.—Apples, none bearing; two hundred peach trees, bearing.

Two steam, grist and saw mills, each having two run of stone. Original cost of both, $30,000.

Amount of grain ground per month, 25,000 bushels. Amount of flour manufactured per month, 5,200 barrels.

Crops of all kinds were much injured by grasshoppers; several fields of wheat were entirely destroyed by them.

Tuns of hay, 2,700.

Statistics for 1854.

	Number.
Acres under Cultivation	7,213
Wheat, acres	2,345
Barley, "	4,868
Hay, tuns	1,421
Horses	1,403
Mules	208
Cattle	8,989
Hogs	2,776
Sheep	2,995

Very respectfully,
Your obed't servant,

N. W. DUNN,
Assessor of Colusi County.

Brownsville, Oct. 15th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

I have the honor to transmit herewith my statistical report for El Dorado County for 1855. It is not as full as I could wish it, but it is as complete as circumstances will admit.

If it is the desire of our legislators to obtain correct statistical information, I would suggest the passage of an Act authorizing the officers whose duty it may be to collect the statistical data, to obtain the same under oath or affirmation; if this is not done no reliance can be placed in the statistics so obtained, nor will they be complete until such a system is adopted.

The following is as nearly correct as could be expected under the circumstances, viz:

Land inclosed for agricultural and grazing purposes, about 8,000 acres.

	Acres.		Bush.
Wheat	450	Yield per acre	26
Barley	340	"	28
Oats	387	"	25
Hay, acres	1,750	" tuns	1¼

FRUIT TREES.

	Number.
Apple	1,608
Peach	1,159
Pear	34
Plum	40
Cherry	39
Fig	12
Apricot	15
Quince	25
Grape-Vines	3,000

ANIMALS.

Horses	907
Mules	384
Asses	65
Neat Cattle	1,281
Work Oxen	690
Milch Cows	769
Calves	519
Sheep	654
Swine	4,620

I think the number of swine might be put down at 8,000. The amount above is the number actually reported to me, but there is a great many running at large of which no correct account can be given.

Value of animals slaughtered per annum, $600,000.

The above estimate is based upon information obtained from our most experienced butchers and cattle dealers, and is not far from correct; if anything, it is rather below the mark.

Value of poultry, $5,000.

CANALS.

There are twenty principal ones in the county, sixteen of which have a never failing supply of water throughout the year.

	Miles.
Total length of main trunks of canals	475
Lateral branches of canals	325

Of the capacity I could not obtain any correct information. This I regret, inasmuch as canals are the principal property in the county, consequently the source of a large amount of revenue both to the State and county. I would like to see something done by our next Legislature toward obtaining correct statistics in relation to the cost, capacity, etc., of canals within the State; such information would be a source of satisfaction to the people as well as of information and usefulness.

SAW MILLS.

Water Mills	16
Steam Power	24
Total Mills	40

Many of these are not in operation owing to the fact, that those mills which were erected in the years 1851–2, low down among the foot hills, have cut up all the timber in their immediate neighborhood. Many of them are being removed higher up on the spurs of the mountain, where an abundant supply of the finest timber is to be had, consisting of sugar, pitch, yellow and spruce pines, fir and cedar also abound; and ash, nutmeg, birch, yew and live oak are to be met with along the water-courses and mountain cañons. A good quality of black oak grows on the spurs of the Sierras, which is well adapted for wagon building. The market value of lumber varies from twenty to forty dollars per 1,000 feet.

QUARTZ MILLS.

There are seven in all in active operation, and some six or eight being built, besides a number of arastras used in prospecting.

This species of mining has lain dormant since 1852. It has recently received a new impulse, owing to the fact of several rich leads having been discovered and the means of saving the gold being better understood now than formerly. I think quartz mining will increase one hundred per cent. in El Dorado County within the next year. The county is traversed by numerous quartz lodes or veins, which are not yet prospected, many of them no doubt gold bearing. Marble also abounds in the western and south-eastern portions of the county, varying in Colusi from pure white to coal black. Some of it is of a beautiful gray or blended color, and all is susceptible of a high polish.

The amount of quartz crushed daily is about fifty tuns, yielding from twenty to

eighty dollars per tun. Some of the mills have made as high as $3,000 in a single week.

Placer mining is not confined to any particular portion of the county, but is co-extensive with its limits, and although some portions are fenced for agricultural purposes, yet it is liable to be dug up any day by the hardy miner in search of the yellow treasure. At no period since the possession of the country by Uncle Sam were the prospects of the placer miners better than at present in El Dorado, if I except the want of that indispensable article, water.

1 Flouring Mill, not in operation.
8 Lime Kilns.
2 Brick Kilns.
15 Toll Bridges.
16 Miles of Toll Road, in connection with Toll Bridges.
3 Breweries.
2 Tanneries.
2 Soda Factories.

TELEGRAPHS.

The Alta Line enters the county on the west *via* Mormon Island, in Sacramento County; thence to Diamond Springs, Placerville, Coloma and Georgetown; thence to Auburn, etc., in Placer County. Length of wire in El Dorado County, seventy-five miles.

COUNTY BOUNDARIES.

The southern boundary of this county was changed by an Act of the last Legislature, which does no credit to the geographical talent of that Body. They were either sadly misinformed or totally ignorant of the geography of the county. They constituted an air line, commencing at the eastern boundary of Sacramento County, running thence to the South Fork of the South Fork of the Cosumnes River, the boundary line between the Counties of El Dorado and Amador. The said air line upon being applied to *terra firma* by our County Surveyor, was found to cross the Cosumnes River four times within the distance of eight miles, and below all the forks of the stream, thereby rendering it almost impossible for the collecting officers of either counties to ascertain when they are within their respective counties. That it would have been better to have substituted the natural (the stream) for the artificial boundary, no sane man will deny. But our Legislative Solons thought differently.

The boundary as at present fixed is not satisfactory to a large portion of the people living in the territory, or district, annexed to Amador. I know by personal observation the people desire to remain in El Dorado County, and if the question was left with the people of the district to decide, they would undoubtedly vote to remain in El Dorado County. In other words, they would vote for making Dry Creek the southern boundary of El Dorado, which is a natural boundary, and, therefore, preferable to any *air line* or other artificial one.

I remain Respectfully, etc.,

J. McKNIGHT,
Ex-Assessor of El Dorado County.

Los Angeles, Oct. 22, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

According to my duty, and in compliance with your circular issued March 1, I report to you as follows for the present year:

Los Angeles County, one of the richest and best of the southern portion of the State, is of large extent and will admit of a large population. Within its limits are irrigable and arable lands, of natural wetness, of temporal fields of pasturage, with watering places for cattle; water sufficient to irrigate more than a hundred thousand acres of land; a temperate climate, extremely healthy—great elements and sufficient resources for progress and for the comforts of life, and the only thing wanting is population.

In regard to productions, it has good timber, pine of several classes, oak and other trees; produces wheat, oats, barley, corn, beans, peas, garbanzas, lentines, cotton, tobacco, sugar cane, flax and linen; fruit in large variety, such as pears of every description, apples, cherries, apricots, peaches, almonds, nuts, oranges, limes, citrons, olives, grapes, sweet potatoes, watermelons, muskmelons and vegetables of all kinds.

Its fields feed—

	Number.
Gentle Cattle	102,000
California Oxen	1,181
" Milch Cows with Calves	1,450
American Oxen	365
" Milch Cows	696
" Cattle	467
Wild Horses	16,300
Gentle Horses	3,540
Sheep	28,538
Hogs	1,900
Mules	1,299
Goats	600
Asses	260
Total	158,596

The cultivated lands are of—

	Acres.
Temporal	8,000
Natural wetness	2,000
Irrigated	13,000
Total	23,000

And have produced—

	Quintals or Cwt.
Grapes	41,004
Wheat	10,700
Corn	26,030

	Quintal or Cwt.
Beans	8,654
Potatoes	6,700
Oats	500
Sweet Potatoes	450
Total cwt	940,038

Besides the fruit trees, melons, squash and other vegetables, of which I have not been able to ascertain the amount.

There is also a salt lake situated on the western part of the San Pedro Rancho, where is established the Pacific Manufactory Salt Works Company, and taken together, the artificial and natural products make the amount of 10,000 quintals, or 1,000,000 pounds.

Tuns of hay that have been cut, 1,300.

The sheep have produced of wool, 500 quintals, or 50,000 pounds.

In regard to the mineral resources of the county, there are none at present being worked, but the old "diggings" of San Francisquito, in which about eighty persons are employed, and another in the Curra of Azusa, where are at work about forty persons, and both produce an average of from one to three dollars per day to each person.

With respect to improvements, there has been a regular reformation of the old, and building of a large number of new houses.

Two new and excellent flour mills, water power, in addition to the number of last year.

The cultivation of land has increased, also the planting of trees and vineyards.

The sinking of a well that has reached the depth of five hundred and seventy-five feet, is progressing, and which has cost the sum of $3,000.

Our roads have also been considerably improved.

Your obedient servant,

A. F. CORONELL,
Assessor Los Angeles County.

Tomales, October 4th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

The following are the statistics of Marin County for the year 1855:

There have been 2,490 acres of wheat sown, of which 2,028 is entirely destroyed by rust and smut, leaving only four hundered and sixty-two acres that has been harvested, and the largest portion of that is unfit for milling. Eight hundred and ninety-four acres of oats; rather light crop. Seven hundred and forty-four acres of barley; also light. Eight hundred and fifty-nine acres of potatoes, of which not over three-fourths will be harvested. The yield will not

exceed thirty sacks to the acre of merchantable potatoes. One hundred and eighty acres of white beans; all good, and will yield well.

LIVE STOCK.

Horses	3,522
American Cattle	2,982
California Cattle	14,793
Hogs	4,027
Sheep	2,589

The amount of taxable property is $833,679.

FRUIT.

There are but two orchards worthy of note. Capt. J. A. Morgan, who lives within one hundred rods of the beach of the ocean, has five hundred apple trees, forty pear, sixty peach, plum, quince, cherry, and some grape vines, all growing finely, and about one-fourth of the apple and pear trees are bearing full of the choicest of fruit. P. B. Hewlett has a fine variety of trees and vines, but all are quite young.

I would suggest the immediate survey and location of the boundary line between this and Sonoma County—as much trouble has arisen, and more will be, without the line is located by survey.

Yours, respectfully,

WARREN DUTTON,
Assessor Marin County.

County Assessor's Office,
Napa City, September 20th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with the request contained in your circular letter, I respectfully submit the following report:

There were sown the past season in this county—

	Acres.
Wheat	11,058
Barley	1,584
Rye	120
Oats	770

	Acres.
Corn	488
Buckwheat	20
Peas	72
Beans	95
Potatoes	61
Melons	47
Onions	10

The yield of grain was very light. The wheat crop cannot be estimated over twelve bushels to the acre, and barley at about twenty bushels. The soil is well adapted to the cultivation of grain, and produces abundantly. Vegetables require irrigation. The rust, the past season, acted most injuriously upon all the grain crops, but more especially upon that variety of wheat known as the Club Head. There was much of this variety sown, though very little harvested. The reason of this variety suffering most is, it is an earlier wheat, and during the few days, when the causes of the rust were acting, it was in a state to receive the greater injury.

This disease is a new one for this section of the State, and is to be attributed to the peculiarity of the season.

During the latter part of winter the weather was very mild, with sufficient rain to give vegetation a rapid growth. The rains continued later than usual, and were followed by extremely hot days. These had the tendency to hurry the ripening. The nights are cool, and through the summer the fogs from the bay will visit the valley toward morning, which is soon dispersed again by the sun. This change, thus alternating between excessive hot days and cool nights, while the plants was in that tender state, consequent on such a rapid growth, caused the straw to split, and the exuding of the sap, exhausting the substance of the plant, prevents the grain from filling, and forms a rust. That the fogs contributed to this disease, is proved from the fact, that where they were the heaviest and remained the longest, the rust was the most fatal. The smut, also, done considerable injury to many crops.

As a remedy for this disease, I would recommend more care in the selection of seed, for if smutty wheat is sown, the infection will be extended to the growing crop; on the other hand, if clean, healthy seed is sown, a healthy crop is much more certain to follow.

	Acres.
Amount of land under cultivation, as above given	14,325
Occupied by gardens, vineyards and orchards	675
Total amount under cultivation	15,000

Whole number of acres assessed in the county, 250,347; nearly all of which is adapted to grazing or tillage.

	No. lbs.
Hay	9,126,000
Wool	11,197
Butter	58,310
Cheese	17,537

	Number.
Apple Trees	16,062
Peach "	66,962
Pear "	6,129
Apricot "	500
Cherry "	525
Plum "	650
Quince "	337
Fig "	275

The valley is well adapted to the cultivation of fruit. The growth of the tree is rapid, and much attention is being paid to obtain the best varieties. Messrs. Kellogg, Hudson and Nash, the pioneers of this county, have each very fine orchards, which have born sufficient to test the quality of the fruit, and are beginning to reward their owners for the labor and expense incurred to procure them.

There are many other large orchards under way. The mode of cultivation is generally by irrigation, but as there are so few locations where sufficient water can be obtained to irrigate an orchard, I would call attention to the plan adopted by Messrs. Thompson, of Suscol, in this county. It is subsoiling.

They have in one orchard about 30,000 trees, (apple and peach,) and their growth the past season proves the efficacy of their mode of culture. The ground, in the first place, was broken up to the depth of twenty inches to two feet, then thoroughly harrowed with a long sharp-toothed harrow; thus pulverizing the soil to a sufficient depth, that it retains the moisture as it rises from the earth. When the advantages of subsoiling are more generally understood, it will be more generally adopted, not only to the cultivation of fruit, but of grain also.

Another great advantage in the culture of fruit trees is, to keep the ground perfectly clean. No weeds, grass, grain, or vegetables even, should be allowed in an orchard, for they draw to their own support much of the nutriment and moisture that would otherwise have nourished the tree. This is particularly true, where water cannot be obtained for irrigation.

These remarks apply equally well to the cultivation of the vine also. There are now 57,500 vines in the county, estimated to yield three lbs. of grapes to the vine. Attention is being called to the culture of the grape, and with the advantage of climate and soil, if skillfully followed, this might be made a lucrative employment.

	Number.
Horses	4,114
Mules	290
Oxen	3,616
Cows	9,093
Young Cattle	4,670
Hogs	12,011
Sheep	5,396
Goats	65

Value of Animals Slaughtered	$20,000
" Poultry	14,000
" Eggs	13,124
Total	$47,124

There are two steam flouring mills with four run of stone; three water do. with four run of stone; and one steam and four water saw mills.

For amount of swamp and overflowed lands, internal improvements and similar information, I would refer you to the report of the County Surveyor.

All of which is respectfully submitted.

JOHN COBB,
Assessor Napa County.

County Assessor's Office,
Nevada City, October 1, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with the requirements of the law, as contained in your circular of March 1, I take pleasure in submitting to you the following statistics. I have used every exertion to collect them accurately, and wherever the necessary data could not be obtained I have availed myself of the opinions and advice of some of our oldest and most experienced citizens, in making estimates in their stead.

The principal part of this county is mountainous, and unfit for extensive farming, and up to this time the ranchos are generally confined to the valleys and flats, which, however, produce grains and vegetables of superior quality, and in the utmost profusion.

The quantity of land claimed by actual settlers is 29,974 acres, the assessed valuation of which is $192,375. Of these lands, only 4,300 acres are now under cultivation, divided as follows:

	Acres.
Wheat	1,100
Barley	1,500
Oats	350
Indian Corn	50
Hay	700
Potatoes	300
Other vegetables	300

Fruit trees are as yet very sparsely scattered over the county, and but few of them in bearing this season; they appear however to flourish well, and grow with remarkable rapidity—peach trees often producing perfect fruit in two years from the seed. Considerable interest is manifested in their culture, and in a few years our county will be well stocked with the different varieties. Present number of fruit trees, 3,200, of which about three-quarters are peach. Grape vines, as well as the different varieties of berries, are being introduced to some extent, and appear to do well. Stock raising is not followed here as a separate business, and we depend mainly on the lower counties for our supplies of animals.

Number of Horses and Mules in the county	1,500
" Cattle	2,300
" Swine	7,800

There are in the county forty-four ditch companies supplying the mines with water. The ditches have generally been carried through by men of limited means, and under disadvantages which have in many cases swelled the actual cost of them far above their present value, though the majority of them pay well, and some very largely. Aggregate length of ditches, 682 miles. Assessed valuation, $345,900.

These ditches furnish a good supply of water during the winter and spring, but the majority of them become entirely dry during the summer. The general price of water is fifty cents per inch.

We have eight toll bridges, with an aggregate assessment of $26,300.

Probably the most important branch of industry in the county is quartz mining. The reaction which succeeded the wild excitement arising from the discovery of gold-bearing quartz, brought ruin to hundreds of our citizens, and cast a discredit on the business which for a long time deterred capitalists from engaging in it, but the industry and perseverance of a few individuals has at last demonstrated the practicability of working these mines profitably, and now the business is established on a firm basis, and is looked upon by those engaged in it as being the most profitable and permanent of all the different branches of mining. We have now in active operation in the county, sixteen quartz mills, of which five are run by water.

Aggregate tuns of rock crushed in a year, 75,000. Average value of rock per tun, $25.

Cost of raising and crushing, per tun, $15.

Aggregate value of mill machinery, $300,000.

The majority of the ledges from which this rock is taken have not as yet been opened to any great extent, only eight out of one hundred and fifty being below the water line, but enough has been ascertained to give assurance of the richness and permanency of these mines, and induce those interested to make improvements of a more substantial and costly nature than have heretofore been made. As any estimate of the value of these mines would be a mere conjecture, I refrain from giving one. The amount, however, of the original investments would probably exceed $2,000,000.

We have in operation twenty-seven saw mills, besides five attached to quartz mills. These mills are capable of cutting 2,000,000 feet of lumber per month. The timber is very large and fine on the ridges, and consists of the ordinary varieties of pine and cedar. The sugar pine is the best, but is becoming somewhat scarce in the neighborhood of the older mills. Large quantities of lumber are sent by wagons to Marysville and Sacramento. The value of rough lumber here is from $20 to $35 per M. There is one grist mill in the county, employing a capital of $25,000, and manufacturing about 5,000 barrels of flour per annum, valued at $60,000, besides grinding twenty tons of barley per month.

In regard to the produce of our mines, it is difficult to arrive at any accurate figures on the subject, but judging from the amount of dust brought into our banking and express offices, we can safely set the annual yield at $5,000,000.

I can unfortunately give you but few meteorological facts of interest. I have endeavored to ascertain the quantity of rain, etc., for the past year, but could meet with no one who keeps a gauge. From a thermometrical register, however, kept at the Gold Hill Mill, Grass Valley, I have made up the following table, showing the average temperature of each month, from January, 1854, to July, 1855, inclusive, at different periods of the day:

METEOROLOGICAL OBSERVATIONS.

Month.	1854.				1855.			
	6 A. M.	Noon.	6 P. M.	Midnight.	6 A. M.	Noon.	6 P. M.	Midnight.
January	28°	52°	37°	27°	33°	49°	45°	36°
February	36	51	42	37	38	60	48	40
March	36	56	47	38	41	60	53	44
April	43	64	57	44	41	62	55	43
May	49	70	63	49	44	64	57	45
June.....	54	78	72	52	58	86	78	57
July	64	96	87	63	62	97	85	59
August	59	90	82	58				
September	51	87	74	53				
October	47	72	59	53				
November	41	79	58	43				
December.....	37	68	43	36				
Average of the year,	45	72	60	46				
Highest range, July,	74	110	100	76	75	110	99	68
Lowest " Jan.,	10 be'w	30	6	6 below	17	31	29	26

All of which is respectfully submitted,

JOHN McCOY,
Assessor of Nevada County.

Assessor's Office,
Auburn, Nov. 26, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with your instructions I beg to make the following report:

This county covers a large territory, bordering on, and nearly surrounded by, four others, viz: Nevada, El Dorado, Sacramento and Sutter, the defined and undefined lines of the same, the County Surveyor will furnish you a report, as per instructions.

The County of Placer, like many of the northern, is naturally divided into lands adapted to mining and agriculture, and each section is generally improved as such. The western or agricultural, joining Sacramento and Sutter, lies below, or west of, what is termed the foot-hills. Into this section the streams that rise in the mountainous sections course their way until lost in the Plains of the Sacramento Valley,

or empty into some of the principal rivers, along whose banks are spread out in one great level plain, the most desirable farming lands. All of these lands have been long located, and on which are many good and permanent improvements. These ravine bottom lands are desirable on several grounds—water for stock and domestic use in abundance during the long dry season, banks lined with timber, affording firewood, and shade groves for stock. There are a few ranchos in isolated spots, scattered through other sections of the county, on the mountains and rivers, but generally speaking, agriculture is confined to this section.

The principal production of these lands are wheat, barley oats and hay, though experimental crops in corn and other grains have been planted in several instances. The number of acres sowed, and the average per acre of any of these crops, it was impracticable for me to obtain, as a considerable portion of this property was assessed by my predecessor, who held this office until June last. Had I made the entire assessment, it would have afforded me the greatest pleasure to have noted closely and particularly, every statistic called for by your instructions, beside others which in my discretion would have contributed to externd general information, and promote in the least the general interest of the State.

Through the agricultural, or lower, portion of this county, and a portion of the adjoining Counties of Sacramento and Sutter, is a general grazing depot, where stock crossing the plains the year previous, and young and poor cattle from the southern counties, are kept and fatted for market. During the whole season, from this section, little bands of cattle are driven north, east and south, for immediate slaughter. Among those citizens of our county are many enterprising and thrifty farmers.

No reliable or correct record of the number of cattle, sheep, hogs, etc., in the county, can be given.

During the past year or two considerable attention has been given to the introduction of horticulture. A number have planted the different fruit trees, together with the grape, and are patiently awaiting time to decide the important problem. These experiments are not confined to the agricultural portion proper, but are general.

The following tabular statement, from an amateur farmer residing near Auburn, has, perhaps, the largest and most advanced orchard in the county:

	1 year.	2 year.	3 year.	4 year.	Total.
Apple Trees	30	34	25	15	105
Pear "	5	5	5		15
Peach "	8	4	5	4	30
Cherry "	3		10	4	17
Plum "	3	2			5
Apricot "	6				6
Quince "	6	4			10
Grape-Vines	5	10	10		25

RANCHOS.

There are one hundred and forty-three improved ranchos in the county, many of which have good and permanent buildings and fences, others are only inclosed with brush, while some are only surveyed and staked out.

The improvements and stock on these ranchos are assessed at $219,000, paying a tax as follows:

State tax, sixty cents on the one hundred dollars	$1,314 00
County tax, one hundred and five cents on the one hundred dollars	3,613 50
Total	$3,613 50

The tax valuation of this property has gradually increased, and but for the conflicting interest between the farmer and miner, would have been double what it now is. The decision by the courts, giving the miner the right to enter upon, and dig any lands in the mineral districts, is a check upon improvements on this kind of property. Some of the most valuable ranchos in the county are suffering by this decision.

CANALS.

Auburn and Bear River Water and Mining Company.—Capital, $650,000. Length of canal, including laterals, one hundred and seventy-five miles. Office at Auburn.

American River Water and Mining Company.—Capital stock, $300,000. This canal is located on the west bank of the American River, taking its water at Tamaroo Bar, in this county, and leading to Mississippi Bar, in Sacramento County. Its length is about thirty miles, twenty of which is in Placer.

Gold Hill and Bear River Water Company.—Capital stock, $96,000. Main trunk, thirty-two miles; lateral, twenty-six miles. Office at Gold Hill.

Yankee Jim Union Water Company.—Capital stock, $90,000. Office at Yankee Jim's.

El Dorado Water Company.—Capital stock, $60,000. Length of canal and laterals, thirty miles. Office at Michigan City.

Todd's Valley Water Company.—Capital stock, $32,000. Length of canal, twelve miles. Office at Todds Valley.

The above list includes the principal incorporated canals of the county. Aside from these, there are twenty-three others, of smaller capacity and capital. Many of them are of great value to the miners as well as the capitalists, and pay a better interest on the amount invested than some of the larger companies. The assessed value of the twenty-nine canals in the aggregate, is $375,000.

SAW MILLS.

There are about twenty saw mills in operation in the county, which annually produce many million feet of lumber—the exact amount I had no means of ascertaining. The trade is one of the most important in the county, and one which is increasing in growth and prosperity. A share of this lumber is consumed in the county for buildings, fences, flumes and mining generally, but an important trade between these mills and the City of Sacramento, is carried on, at which point it comes in competition with the Oregon lumber—that city being the highest point that lumber reaches into the interior. The assessed value of these mills is $86,000.

State tax, sixty cents on the one hundred dollars	$516 00
County tax, one hundred and five cents on the one hundred dollars	903 00
Total	$1,419 00

TOLL ROADS AND BRIDGES.

There are nine toll roads and bridges in the county, the assessed value of which is $71,000.

State tax, sixty cents on the one hundred dollars	$426 00
County tax, one hundred and five cents on the one hundred dollars	745 50
Total	$1,171 50

PRINCIPAL STREAMS.

1. *Bear River.*—County line between Placer and Nevada Counties.
2. *North Fork of the American*—Course southwest, through about the center of the county.
3. *Middle Fork of the American*—Southern county line between Placer and El Dorado Counties.
4. *North Fork of the Middle*—A branch of the same bearing north.
5. *Middle Fork of the Middle Fork.*
6. *North Fork of the North Fork of the American.*
7. *South Fork of the North Fork of the American.*
8. *Sacramento River*—Touching Placer on the west, which is the initial point of the west line.
9. *Shirt-tail Cañon*—A long, deep cañon, emptying into the North Fork.
10. *El Dorado Cañon*—A cañon emptying into the North Fork of the Middle.
11. *Secret Cañon*—A branch of the North Fork of the Middle.
12. *Volcano Cañon*—Emptying into the South Fork.
13. *Humbug Cañon*—Emptying into the South Fork of the North Fork.
14. *Indian Cañon*—Emptying into the North Fork of the American.

These rivers, forks and cañons, excepting the Sacramento, are all mountain streams. The action of these waters, during the lapse of ages, have worn deep passages and channels through the mountainous country they occupy, leaving the banks high and precipitous, as well as picturesque. On the North Fork of the American, between Ford's Bar and Green Valley, the banks are so abrubt, ragged and rocky, for a distance of about five miles, that the miners located thereabouts are compelled to use boats in passing to and from their claims. The hight of these mountain river banks vary from one to four miles.

CAPITAL INVESTED IN GOLD MINES.

The amount assessed on capital invested in gold mines in the county, is $100,000, which has been assessed only on productive claims. The total tax on the same, State and county, is $1,650. When the still larger amount of capital invested in drifts and tunnels shall become productive, as a large share of it no doubt will, the revenue from this source will be very greatly augmented. At present it is believed to be greater than any other county.

QUARTZ.

There are but two successful quartz mills in the county, both of which have gone into operation during the present year. They were both built as *experimentors* or *prospectors*, and with steam power only sufficient for six stamps. Messrs. Strong & Co., near Humbug Cañon, in the extreme eastern portion of the county, have the honor of putting into operation the first successful quartz mill, and Messrs. Hancock & Watson, the second, which is located at Sarahsville, near Michigan Bluffs. These gentlemen are the successful pioneers in the mode of mining which is to succeed eventually placer diggings. When these old surface washings shall have been forgotten, the sound of the quartz stampers will be heard from almost every little ledge which the miner now daily passes by without notice.

MINING IN GENERAL.

The rivers and ravines, hills and flats of Placer County, since the ever memorable year of 1849, have gained a reputation throughout the State for richness not inferior to none; and notwithstanding the immense amount of wealth removed from them, they still continue to yield a fair reward to the industrious miner. There yet remains, almost untouched, a section of placer diggings across the full extent of this county, from Bear River to the American River, adjoining the Sacramento Valley, which will yield good wages when it is supplied with water.

The assessed value of the taxable property in this county, for the year 1855, is $1,700,000.

The above is the most full and correct report I can make with the materials in my possession. Hoping to be more diligent and successful in the future,

I remain,
Very respectfully,
Your obedient servant,

A. S. SMITH,
Assessor Placer County.

American Valley, July 1st, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

Your communication of date of March 1, and with mail mark upon it March 28, only reached me about one week since, entirely too late for my full compliance with the requirements of your circular. My duties as Assessor are nearly completed, and my acts as such have been governed by the light furnished by the law as contained in our court at the capital of our county. Many of the requisitions of your circular have been omitted in my report, because they were unknown to me. I regret exceedingly that your instructions to me have been so long in

their passage, and although I cannot meet the command of a full report by the first of September, I will do my utmost to repair the error by going over my district again, and collecting all the information I can obtain in relation to the different subjects by which it is believed the resources of our State may be fully developed.

I herewith transmit you a report of inquiries, so far as I have gathered them, and will promply forward such other information as I can acquire in my second canvass of the district at as early a period as possible.

AGRICULTURAL LANDS.

My information only extends to lands claimed, being in amount 14,604 acres.

MINERAL LANDS.

The almost entire surface of this county may be placed in this class of land, as gold is found extensively throughout the whole county, being the only mineral as yet made available.

SWAMP LANDS.

My information is limited with regard to this class of land, and is not offered as reliable authority. There is a large tract of land known as the "Feather River Meadows," situate in this county. This, in connection with other less extensive tracts, may be estimated to contain from 4,000 to 5,000 acres of land that would be denominated low or swamp lands.

LANDS ADAPTED TO TILLAGE.

By far the larger proportion of land contained in this county is unsuited to tillage, the face of the country being extremely mountainous, the summits of many of them being covered with perpetual snow; still there are to be found many beautiful valleys, interspersed here and there, protected from the rigor of the climate and the violence of the storm, by the wall of hills surrounding them, that are available for tillage, and will undoubtedly become of great value for that purpose.

GRAZING LANDS.

These are usually to be found in the valleys, which are mostly covered with a luxuriant growth of grass, while our hill-sides, with few exceptions, are destitute of vegetation.

TIMBER LAND.

The principal growth of timber are pine, spruce, and such other kinds as are usually found on the higher mountains, with a small proportion of oak.

GRAINS AND VEGETABLES.

In reference to these articles, I have to say that my report must be incomplete, their production being extremely limited in many cases, so much so as scarcely to be worthy of report on the Assessor's books.

	Bushels.
Wheat	5,765
Oats	1,015
Barley	854
Potatoes	2,530
Indian Corn	5
Tuns of Hay	1,500
Pounds of Butter	2,000

LIVE STOCK.

Horses and Mules	441
Asses	65
Oxen and Cows	715
Hogs	1,000

INTERNAL IMPROVEMENTS.

The infancy of this county precludes the possibility of their being many improvements of this character.

Saw Mills, 11; kind, amount cost, and value unknown. Grist Mills, 1; two run of stone, rest unknown. Quartz Mills, 6; statistics at present unknown.

All of which is most respectfully submitted.

CHRISTOPHER PORTER,
Assessor of Plumas County.

By MARTIN R. STREETER, Deputy.

Sacramento, Oct. 1st, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

Having received your Circular, I herewith transmit to you the following statistics of Sacramento County:

GRAIN.

No. acres of	Wheat	5,191
"	Barley	5,447
"	Oats	1,547
"	Corn	204
"	Buckwheat	11
"	Rye	3
"	Broom-corn	5
"	Flax	1
Total No. of acres of Grain		12,409
No. tons of Hay		5,207

Wheat will average 25 bushels to the acre, making in all 129,775 bushels, equal to 26,000 bbls. flour. Barley will average 30 bushels to the acre, making in all 163,410 bushels.

VEGETABLES.

No. acres	Irish Potatoes	303
"	Melons	191
"	Cabbages	159
"	Onions	125
"	Sweet Potatoes	89
"	Peas	76
"	Pumpkins	72
"	Turnips	64
"	Beets	63
"	Beans	54
"	Carrots	56
"	Parsnips	47
Total No. of acres of Vegetables		1,299

FRUIT TREES, VINES, ETC.

	Number.
Apple	15,405
Peach	27,102
Pear	4,173
Plum	5,927
Cherry	1,993
Apricot	886

	Number.
Quince	836
Fig	514
Almond	4
Grape-Vines	33,180
Currant and Gooseberry Bushes	526
Total	90,554

Half the above are one year old; balance from two to four years old.

LIVE STOCK.

	Number.
Horses	1,906
Mules	231
Asses	11
Cows	4,860
Calves	2,749
Beef Cattle and Oxen	3,322
Bulls	12
Sheep	7,678
Swine	5,949
Goats	93
Total	26,811

Ten thousand head of Sheep were sold and driven from the county just previous to the assessment.

POULTRY.

	Number.
Chickens	18,522
Turkeys	971
Peacocks	3
Total	19,496

ANNUAL PRODUCTS OF DIARY.

	Pounds.
Butter	56,136
Cheese	49,940
Total	106,076

CANALS, BRIDGES, MILLS, ETC.

Seven Steam Flour Mills, with twenty-one run of stone, grinding six hundred and thirty barrels of flour per day. Value of Mills, $66,000.

Two Steam Saw Mills, which saw 2,500,000 feet of lumber per annum. Value of Mills, $35,000.

Two Iron Foundries.

Ten Bridges—total length, 4,000 feet; cost, $307,800; annual income, $39,000.

Seven Ferries—cost $3,800; annual income, $9,200.

One Plank Road, ten miles in length; cost, $60,000. Lately bought by Board of Supervisors, for $26,000.

Ramsdell & Co.'s Distillery.—Steam power, consuming one hundred and twenty bushels of grain per day, making three hundred and sixty gallons of whisky per day. Value of Distillery, $8,500; value of whisky made per year, $89,856.

Cosumnes and Michigan Bar Canal Co.—Have three miles of canal in this county. Cost, $3,000; annual income, $5,000.

Miners' Cosumnes and Deer Creek Water and Mining Co.—Have fourteen miles in this county. Original cost, $80,000; annual income, $8,000.

Natoma Water and Mining Co., (A. P. Catlin, Pres't).—Have six miles of main canal in this county, with thirty miles of main branches and several miles of smaller branches. Cost of canal, branches, reservoirs, aqueducts, etc., in this county, $150,000; annual income from this county, $100,000.

American River Water and Mining Co., (A. P. Catlin, Pres't).—Have twelve miles of canal in this county. Cost of reservoirs, aqueducts, canals, etc., in this county, $75,000; annual income, $75,000.

Yours, respectfully,

H. J. BIDLEMAN,
Assessor of Sacramento County.

San Bernardino County, Oct. 25th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In reply to the requirements contained in your circular of the first of March last, I herewith transmit my report for the present year (1855) in the following style: First, all lands in the county, together with their qualities and locations, names of ranchos and the productions thereof, etc.

1

THE RANCHO SAN BERNARDINO

Is situated at the base of the mountains in front of the Cajon Pass, and is surrounded on the south side by a range or chain of high hills. This rancho is situated in one of the finest valleys in the State, well watered with many fine streams, flowing from the mountains, forming the river called the Santa Anna, which flows into the Pacific south-west of San Bernardino City. This valley contains about forty leagues of land of fine, rich soil, well adapted for the growing of grain, vegetables and fruits; it is also a fine grazing country for all kinds of stock, and is well timbered. The mountains on the north are covered with fine pine, redwood, oak, etc. These mountains are quite rugged, which renders it diffi-

cult to get to the lumber, though the Mormons, the people of this valley, have built and made a road up and over the mountain to where they have an immense quantity of lumber, which they can never exhaust. They have five mills on the other slope of the mountain; one that saws by steam and the others by water power. They have also three other saw-mills in the valley, one for sawing, boring and morticing lumber for fencing. There is also a fine large flouring-mill in the valley which is able to manufacture large quantities of superfine flour, but their wheat crops failed so that they have but little to grind. This mill has but two run of stone. The saw-mills are not doing much at present on account of having but little water, except the steam mill, which cuts about 5,000 feet of lumber per day.

The Mormons, the people of the Rancho San Bernardino, have almost entirely failed in raising wheat, and raised but little barley; their gardens, also, is an entire failure, with the exception of a few, which raised some good vegetables. The Mormons had but little grain in cultivation, about 4,000 acres; 3,000 in wheat and 1,000 in barley and oats. The wheat crop was so near an entire failure, that I do not believe they got their seed again. I have inquired of many farmers, and they tell me that the best they heard of was but twelve bushels per acre, and from that down to three bushels per acre; about one-half of the wheat crop was not cut. The barley and oats yielded about fifteen bushels per acre, making 15,000 bushels of barley and oats. I think the wheat crop could not average more than four bushels per acre, making but 12,000 bushels on the Rancho San Bernardino. The wheat is so very light and chaffy, that it will take four or five bushels to make one hundred pounds of flour.

The cause of this great failure in small grain in San Bernardino was from a mist or fog that appeared to come from the sea coast and settle on the wheat and barley; some places it appeared to rust but small portions, while in others the wheat was killed, but left bright and without any rust. I think that this fog or mist was of a salt nature.

The reason why the gardens failed was, that they did not plant as they should have done, and those that planted properly did not attend to them as they should have done. These are the reasons why the gardens failed so much, and which I heard some of our citizens acknowledge a few days ago, and also seeing some who attended to their gardens raise very good vegetables.

The people of San Bernardino have set out or planted quite a fine vineyard of about 50,000 vines, which bore but few grapes the last two seasons. They have also set out quite a number of fruit trees of different kinds. Last year they raised some few peaches, but this year about five hundred bushels of fine peaches were raised on this rancho. The people of the City of San Bernardino are still building up the city, but appear to get on very slow; in fact, everything appears to progress in a slothful manner.

This rancho has not been surveyed or set off, though the U. S. Land Commissioners have confirmed eight leagues, and Lyman & Rich still claim the whole valley, which is about forty leagues of land. The citizens of San Bernardino rancho and city have quite a large number of American cows, and make considerable butter and cheese; they have made, during the past season, about 2,000 pounds of butter and 2,500 pounds of cheese. They also raise a large number of poultry which yield them a great quantity of eggs, and which amounts to quite a large sum in a year. The price of eggs has been as high as seventy-five cents per dozen, but are now at thirty cents; hens have been sold at twelve dollars per dozen, but are now selling at four dollars.

Amount of Grain and Fruit, Butter and Cheese raised and made on the Rancho of San Bernardino.

Barley, bushels	15,500
Wheat, "	12,000
Peaches "	350
Butter, pounds	2,000
Cheese "	2,500

THE RANCHO JARUPA.

This rancho is one of the finest in the county. It joins the San Bernardino on the south-west, and runs down the Santa Anna river on both sides a distance of thirty miles. It is a fine grazing country on both sides of the river, and is also well adapted for farming and growing all kinds of grain, fruit and vegetables. Seven leagues of said rancho has been confirmed by the U. S. Land Commissioners, but has not as yet been surveyed or set off. There will be a large portion that will belong to the government. About three leagues of this rancho have been sold to Louis Robidoux, and another portion of it was given by Bandina to some Mexicans to form a new settlement. The settlement consists of about twenty families, who have some fine farms, gardens and vineyards under cultivation. L. Robidoux has a fine farm and generally raises 1,000 bushels of wheat, 1,000 of barley, and about 400 of corn, together with an abundance of vegetables; this season, however, his wheat crop was an entire failure, about half a crop of barley, about five hundred bushels, and three hundred bushels of corn, with some few vegetables. Don Louis has some few peach trees, about a dozen of which yielded a full crop of peaches; he has also a vineyard, but having removed the vines last spring they bore but few grapes last season. There is a flouring mill in course of erection which will be ready to manufacture flour in about two months. He also raises a large quantity of stock of all kinds.

The Mexican settlement, of about twenty families, have fine small farms, gardens and vineyards, but have also failed to raise any wheat, but have raised considerable corn and vegetables of all kinds; they raise a great number of cattle and sheep. The Mexicans make no butter nor cheese worth mentioning.

Amount of Grain and Vegetables raised on Rancho Jarupa.

	Bushels.
Barley	500
Corn	2,300
Onions	1,000
Beans	500

THE RANCHO DEL CHINO.

This rancho is both fine and beautiful, having all the facilities for cultivating everything that we may wish to grow. It is also a very fine country for grazing stock of all kinds, and is bounded on the south side by most beautiful hills, which are covered with wild oats in their season. There is also a fine tar spring in these hills which is used for many purposes. The Mexicans cover their houses with this tar. The proprietor of this rancho, Col. J. Williams, does not farm on a large

scale but raises a great number of horses, cattle, sheep and hogs. The Col. acknowledged to having eight and half leagues of land, though I think there is about twice that amount, of first quality; it has not yet been set off. He cultivates nothing more than thirty-five acres of barley and a garden; the barley averaged about twenty bushels per acre, making but seven hundred bushels raised on the Chino Rancho the past season. His garden was worth but little. The Col. has a fine orchard of the different fruits; his peach trees bore a very good crop this season.

Amount of Grain raised on the Rancho del Chino.

	Bushels.
Barley	500

THE RANCHO DE JUAPA.

This is a fine rancho, both for grazing and cultivation. It joins the Jarupa Rancho on the north, the Rancho de la Sierra on the south, the Rancho del Rincon on the south-west and the Rancho del Chino on the west. It is situated on the Santa Anna River, about thirty miles south-west of the City of San Bernardino. This rancho contains about 4,500 acres of land. Nothing has been cultivated this year, though there are 3,000 head of cattle grazing on the rancho. It belongs to the heirs of Thomas Yorba, deceased.

THE RANCHO DE LA SIERRA.

This rancho contains 4,500 acres, is good for grazing purposes, and small portions of it are well adapted for cultivation. It is owned by Don Bernardo Yorba, a Californian. There has been nothing cultivated the past season. There are some houses and corrals and two or three thousand head of cattle grazing.

THE RANCHO DEL RINCON.

This rancho is separated from the Rancho de la Sierra by the Santa Anna River, and joins the Rancho del Chino on the west, Los Angeles County on the south and the Rancho Jarupa on the north. It contains 4,500 acres of land, one-half of which is fine, rich soil and well adapted for cultivating anything one may wish to grow, though there was nothing raised on the rancho the past season worth mentioning. There are about 4,000 head of cattle grazing on the rancho at present. It is owned by Don Bernardo Yorba.

THE RANCHO TEMASCAL.

This rancho lies fifteen or twenty miles east of the Rancho de la Sierra, and in a south-east direction from the City of San Bernardino, a distance of thirty-five miles; it joins San Diego County on the east and Los Angeles on the south. This rancho is very fine for grazing, and there are about 1,000 acres of fine land fit for cultivation. There is a small vineyard and some fruit trees. There are three leagues of land belonging to this rancho, and there is a great number of horses and cattle grazing on it.

THE RANCHO CUCAMONGA.

This rancho lies about twenty-five miles west of the City of San Bernardino, on the road to Los Angeles. It is owned by Mr. L. V. Prudhomme, who says it consists of four leagues of land. It lies close up under the mountains, and is well watered by beautiful streams. There are two vineyards on this rancho having 13,000 vines, which yield on an average fifteen pounds per vine, making 202,500 pounds of grapes raised on this rancho the past season. There is also a fine small orchard of different fruits, peaches, pears, etc., which bore a large quantity of good fruit. There was nothing done in the farming line this season, no grain of any kind sowed or planted except some corn in the garden for using while green. It is one of the most beautiful ranchos in the county.

Amount of Fruit raised on the Rancho Cucamonga.

	Number.
Grapes, pounds	202,500
Peaches, bushels	300
Pears, "	200

SAN TEMOTEO RANCHO.

This rancho lies fifteen miles south-east of the City of San Bernardino, is claimed by Don Louis Robidoux, and contains one league of land. It is very good for farming and grazing purposes, but has not been confirmed as yet and is full of squatters, who have some or six acres of wheat to each family, and about the same in barley, together with small fields of very fine corn. Their wheat did not rust or blast as in other places. I saw some tobacco growing on this rancho as fine as I ever saw in Kentucky, where I have raised thousands of pounds; the owner of this tobacco did not know anything about the raising of tobacco, and requested me to give him some instructions how he should manage to cut and cure it; I did so, but have not learned how it turned out. There are ten families on this rancho, who have all fine gardens of vegetables growing in very good style; in fact, everything appeared to grow well and do well on this rancho.

THE MUSCUPEABE RANCHO.

This rancho lies west of the City of San Bernardino, is situated in the Cajon Pass, and is claimed by White, Crittenden & Co. It has not been surveyed or set off, and it is not known as yet how much there is in the claim, though I assessed it from the county records, and from the boundary lines laid down on the record I supposed that there was at least eight leagues of land in the rancho. This claim has a great quantity of good land both grazing and cultivation. There are some ten or twelve families that have squatted on the rancho with the calculation of its being government land; they have fine little farms and gardens in a flourishing condition.

Total Amount of Grain, Vegetables and Fruit, Butter and Cheese raised and made in the County of San Bernardino.

	Bushels.
Wheat	12,000
Barley	16,200
Corn	2,300
Peaches	650
Pears	200
Onions	1,000
Beans	500
Grapes, pounds	202,500

Total Amount of Stock of all kinds in the County of San Bernardino.

	Number.
Horses	1,356
Mules	191
Cattle	14,501
Sheep	7,304
Goats	106
Hogs	994

GOLD.

The mountains at or surrounding San Bernardino, wherever they have been examined, contain more or less gold. On the north side of the mountain from San Bernardino, and about sixty or seventy-five miles east of the city, there has been discovered, the past summer, some very beautiful specimens of tne finest and purest gold I have ever seen. The gold is coarse, and about as large as grains of wheat, and some of it the size of grains of corn. I have also been informed by several persons that they have some pieces that weighed five or six dollars. This was discovered some time last June, on the side of the mountain near Bear Lake ; from good authority, I learned that about one hundred ounces of this coarse gold had been taken out about thirty miles from this place, on the other side of the lake. There are some persons still hunting and digging, but on account of the scarcity of water there has been but little mining done thus far ; they say that if there was plenty of water all could do well, and enable them to prospect the ground thoroughly ; a great many intend to return when the rains set in. I am also informed that there are ranges of quartz leads running about twenty-five miles in length, and from one to four miles apart. It is supposed that there will be found some very rich claims when this range has been properly examined. Those that have been in that section, say that in every place they prospected they have invariably found the "color." Gold has been found in every ravine along the mountain, from San Bernardino to the Cucamonga Rancho, which is a distance of thirty miles ; it has also been discovered on the Temascal Rancho. From all the prospects that appear, I have no doubt but this will become one of the greatest mining regions in the State.

THE SAN GORGONA PASS.

This is a large and extensive tract of land, about forty or fifty leagues, lying thirty or forty miles in a south-east direction from the City of San Bernardino. There are some few settlers there now, but others are going and settling. The fog or mist that was so destructive to the small grain on the San Bernardino Rancho, does not make its appearance here. Nine leagues of this pass has been claimed by Powel Weaver, as a grant given him by the Mexican Government, but for the last two years has not paid the taxes on it. It is well adapted for grazing and farming purposes.

THE MOHAVE RIVER.

This river is on the other side of the mountains, about fifty miles north of San Bernardino City. I am told there is a fine country for farming and grazing purposes, which is now being surveyed by Cols. Washington, Norris and Washburn who were employed to survey that country, and will soon be completed.

I have given you, in the above Report, all the information I could obtain in relation to the condition and resources of this county. There are many things set forth in your circular that are not here, such as bridge companies, toll-bridges, canals, turnpikes, railroads, electro-magnetic telegraphs, Artesian wells, etc.; also, flax, hemp, sugar, rice, cotton, beeswax, honey, etc. All the articles grown and raised here are mentioned in the above report. I have had nothing worth reporting to you quarterly, but have given you all that I have been able to learn or find out for the present year in this report.

Very respectfully,
Your ob't Servant,

V. JOHNSON HERRING,
Assessor San Bernardino County.

OFFICE OF COUNTY ASSESSOR,
San Diego County, September 30th, 1855.

Hon. S. H. MARLETTE, Surveyor-General :

SIR :

In accordance with the requirements of your circular of March first, which was received by me the latter part of July, I have to make the following report:

GRAIN.

	Bushels.
Barley	15,000
Wheat	3,000
Corn	15,000

LIVE STOCK.

	Number.
Cattle, all classes	18,000
Horses	650
Mules	300
Work Oxen	300
Mares and Colts (wild)	3,000
Sheep	3,200
Hogs	2,000

About three hundred tuns of hay.

The lands of this county, with few exceptions, are generally adapted to grazing purposes. There are a few intervening valleys of excellent agricultural land, which, so far as cultivated, have produced equal to anything in the State. The low price which agricultural products now command, and the distance of this county from the principal markets, have had a tendency to retard agricultural pursuits, and much land that might be advantageously cultivated, is now left for the free use of stock.

The interior or mountainous district of the county is generally well timbered, chiefly oak. In the neighborhood of San Isabel are fine pineries, sufficient to supply, for many years, all the timber that may be required for building or for purposes of internal improvements.

There are but few vineyards within this county that are at present properly cultivated. Upon many ranchos there are the remains of large vineyards that have been destroyed by cattle or permitted to go to ruin. This negligence of the vine is unaccountable. Our soil and climate here are peculiarly adapted to the cultivation of the grape, and the few that are cultivated have not their superior in size or flavor.

The annual products of the diary, cultivation of vegetables, fruit trees, etc., are very small, not sufficient for home consumption.

Your circular having reached me so late, the above report is but an approximation made up from all the facts that came within my reach, but it can be relied upon as being *very near* correct.

I am,
Very respectfully,
Your obed't servant,

E. B. PENDLETON,
Assessor San Diego County.

San Joaquin County, Aug. 14th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with an Act passed 1850, regulating the duties of County Assessors in reference to making an annual report to the Surveyor-General, the undersigned begs leave to report, that the whole number of acres of barley, wheat, etc., required to be reported upon by the Assessor is as follows:

GRAIN, ETC.

	Acres.
Barley	11,549
Wheat	10,197
Oats	1,988
Potatoes	27
Corn	118
Millet	15
Grass	2,000

LIVE STOCK.

	Number.
Neat Cattle	16,326
Horses	3,511
Mules	1,146
Asses	30
Sheep	4,075
Goats	296
Hogs	20,298

MILLS, ETC.

	Number.
Flour Mills	7
Run of Stone	21
Saw Mills	3
Acres of Land under Fence and Improvements	61,788
Acres of Grapes under cultivation	12

Public Schools organized, fifteen.

The foregoing statement is a reliable one, so far as my means of knowing is concerned. In regard to the statement of the number of hogs, I think there must be as many as 30,000, but cannot say this by any authority as a great many people cannot tell how many they have got, from the fact of their running wild in the tules. All the other statements are correct and authentic.

In this county, the present year, I am satisfied that the wheat crop has far less smut than the preceding year. I find no smut among the club wheat, and believe that were our farmers to sow that kind of seed, they would, in a great measure, remedy that difficulty in wheat growing. I think, and can state, too, from my own

experience, that were our farmers to change their seed and not sow the same kind of seed in the same ground for a succession of years, that their crops would be far better, especially wheat. The average number of bushels this year to the acre of wheat, will be about nineteen and a half; barley, thirty; oats, twenty-four; corn, thirty-five (that is, of ears); potatoes, fifty; of pease and beans, there are none raised worth mentioning. There is no fruit of any consequence raised as yet; however, from what information I can gather, there are some 3,000 peach and 1,000 apple trees growing, which are in a thrifty condition. People are waking to a very lively interest in fruit raising. There are about one hundred pear trees in a flourishing condition, some eighteen or twenty of which are beginning to bear fruit.

It is found, from actual experiment, that the grape can be successfully cultivated in all parts of the county. It is impossible to ascertain how many pounds are raised this year, since they are not generally gathered.

At the present time there is no further suggestion to be offered, but I will make another report on the first of October, when I return a supplementary assessment.

Yours, respectfully,

S. A. HURLBURT,
Assessor San Joaquin County.

San Luis Obispo, June 16th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with your circular to County Assessors, I herewith transmit to you the following in relation to same as regards this county:

	Acres.
Grazing	250,000
Agricultural Land	30,000
Wheat Land under cultivation	300

Oak, pine and red wood, but very sparing.

GRAIN, ETC.

	Bushels.
Wheat	6,000
Corn	2,000
Barley	3,000
Beans	2,500
Potatoes	5,000

	Pounds.
Wool	4,000
Butter	2,000
Cheese	2,000

LIVE STOCK.

	Number.
Horses	3,000
Mules	200
Asses	50
Oxen	200
Milch Cows	1,000
Sheep	2,500
Beef Cattle	40,000

Twenty-five acres of fruit trees. No hay, flax, etc.

The number of slaughtered animals this year amounted to $15,000. No internal improvements.

There are two grain and one saw mill, two of which are of water and one of horse power. They have just commenced and I can give no returns.

Our boundary line at present is very conflicting on one side, being the lines between two ranchos, on a plain, and without being marked by any object. Our line should be extended to the old district line and the Santa Inez River, which would give our county a water-course on the northern and southern boundaries. Here were our county lines before the American laws were put in motion, but on the commencement of the collection of taxes, every county desired to augment her revenue by taxing as large a body as possible; and thus, with the encroachments of Monterey County on the north, and Santa Barbara on the south, we have become so reduced as not to be able to raise sufficient revenue for county purposes, while from the great distance to each of the above county seats it is impossible for us to be annexed to either.

Monterey County is now over one hundred and twenty miles in length, and Santa Barbara one hundred and thirty, while San Luis Obispo is only sixty-five miles in length, or about one-half of either of the above. I would beg leave to call your attention to the above.

We have as yet no vineyards. Our statistics of the past year, according to the assessment roll just completed, show no variation from the present of any consequence.

Respectfully,

S. A. POLLARD,
Deputy Assessor San Luis Obispo County.

County Assessor's Office,
San Jose, Sept. 17, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with the duties of my office in connection with that of the office of Surveyor-General, I most respectfully submit the following report of the statistics of the County of Santa Clara:

ACRES OF LAND INCLOSED.

The number of acres of land under fence in this county amounts to 50,000, 25,975 acres of which is in the cultivation of the following products:

	No. Acres.	Bushels.
Wheat	20,000	240,000
Barley	3,000	75,000
Oats	2,000	66,000
Corn	300	6,000
Rye	75	1,875
Buckwheat	20	400
Potatoes	300	15,000

Beans.—Some two hundred acres have been planted, but the most part have perished from the continued dry and hot weather in the months of May and June.

Onions.—The number of acres planted amounts to one hundred, yielding about 2,500 bushels.

Vegetables.—Pumpkins, cabbage, carrots, beets, turnips, and all kinds of vegetables are produced in abundance for home consumption.

Fruit Trees.—There are about 12,000 fruit trees set out in the county, comprising many varieties of apple, pear, peach, cherries, plum, apricot, etc.; about one-half of the number have commenced bearing. In addition to the above number of trees we have some 1,500 pear trees, mostly of the mission orchards, that produce annually an abundant harvest.

Vineyards.—In addition to the orchards we have a number of very fine vineyards, numbering in the aggregate about 30,000 vines; probably one-half of the number are beginning to yield fruit.

Hay.—Acres of hay cut, 4,670; producing to the acre, one tun; making in the aggregate, 4,670 tuns.

Cattle.—Number of American cows, 4,050; do. oxen, 1,621; do. yearlings, 2,163; do. calves, 3,165. Spanish cattle, 9,638. Total number cattle, 20,637.

Sheep.—There are 10,000.

Goats.—Nine hundred and twenty-five.

Hogs.—The number of hogs cannot be correctly ascertained. Suppose number, 15,000.

Horses.—Number of gentle horses, American and Spanish, is 2,900. Wild California horses, 1,750. Total number horses, 5,650. Mules, 433; Jacks and Jennies, seventy-three.

Artesian Wells.—Number Artesian wells, sixty-three; depth, forty to three hundred feet.

Grist Mills.—Flouring mills we have seven, with seventeen run of stone; capable of making per day five hundred barrels flour.

Saw Mills.—Ten, principally water mills, situate in the Sierra de Santa Cruz. Lumber—principally red-wood and fir; an abundance of which there is in the aforesaid mountains.

Mines.—The New Almaden Quicksilver Mines, situate in the Sierra de Santa Cruz about twelve miles south of the City of San Jose, are the richest that have ever been discovered in the world—produce annually about 22,000 bottles; weighing per bottle, seventy-five pounds.

Distilleries.—One.

Tanneries.—Three.

Breweries.—Two.

Magnetic Telegraphs.— California Telegragh Company have thirty miles of wire stretched ; cost, $40,000.

Schools.—The number of common schools organized in the county, seventeen; scholars attending common schools daily, six hundred and ten. Private schools, two; scholars, sixty-three. Seminaries, three ; pupils, one hundred and sixty. Colleges, two ; number of students, three hundred. Universities, one ; students, eighty-five. Aggregate number of pupils attending schools, 1,218.

Military.—Number liable to do military service, 1,532.

Most respectfully,
Your obedient servant,

JAMES H. MORGAN,
Assessor Santa Clara County.

Santa Cruz, October 1, 1855.

Hon. S. H. Marlette, Surveyor-General:

Dear Sir:

In compliance with your request by circular, I transmit the following report. The first, second, third and fourth portions of your circular, I would refer to the County Surveyor of this county:

STOCK.

	Number.
American Oxen	400
" Cows	500
" Beef and Stock Cattle	350
California Oxen	300
" Cows	500
" Beef and Stock Cattle	4,850
American Horses	175
Mules	175
Sheep	2,200
Hogs	3,400
Goats	40
California Horses	1,200

GRAIN, ETC.

Acres of Wheat	4,000
" Harvested	1,500
" Not harvested—spoiled by rust and smut	2,500

In wheat sown in situations where there was a free circulation of air through it, the rust is not so bad. I believe the cause of the rust is this: The heavy fogs or dews prevailing during the night being followed by very warm days. In the upper portions of the county, and where cold winds are prevalent, the grain is good. The average yield of wheat throughout the county is about twenty bushels per acre.

	Acres.
Oats	1,200
Harvested	700

Average yield throughout the county, twenty-eight bushels per acre. That not harvested, in same condition as unharvested wheat.

	Bushels.	Acres.
Barley, yield per acre	30	1,800
Beans, "	40	250
Potatoes, "	300	500
Onions, "		45
Buckwheat, "	30	50
Cabbages, "		8
Pease, "		6
Corn, "		90
Gardens		50

FRUIT TREES.

Apple Trees from one to three years old	3,000
Pear " old	51
" " from one to three years old	300
" " " " "	300
Grape-Vines, " four "	7,000
Of Apricot, Cherry, Plum, Quince and Nectarines	200

Eggs, 60,000 dozen. Butter, 2,000 pounds.

Total number of barrels of lime burnt and shipped, 30,609, of which Messrs. Davis & Jordan burned 21,409. It is of two qualities, a fine grained, gray colored, and a white crystallized. There are inexhaustible beds of it within one mile of the town of Santa Cruz. There has been found a quantity of auriferous quartz lying in masses about three miles from the town. The gold can be plainly seen in small particles all over the quartz. In the placers there have been washed out since last March, about five thousand dollars. There are now about twenty men at work in the diggings, who average two dollars per day. The gold is found in most of the ravines, and in some places on the hills, on the surface as well as next to the bed rock. The extent of the gold region is about ten miles by four miles; the best is about three miles from the town. There are also large quantities of chromic and sulphurate of iron in the mountains.

About one-third of the county is adapted to tillage and grazing, the balance being barren hills, and heavy red wood and pine timber lands. There is a wharf at this place, owned by Messrs Davis & Jordan, which answers a very good purpose for landing and shipping, except in southerly storms. There are four flouring mills in the county, with six run of stone, grinding sixty barrels per day to

the mill. There are eleven saw mills, eight water and three steam, cutting each about 1,200 feet of lumber per day. There is one furnace, owned by E. Anthony & Co., with a steam engine attached, for machine purposes. There are five shops where wagons are made, six blacksmith shops, and dry goods and grocery stores.

On account of the imperfect titles by which land is held, the improvement of farms is not great. Total amount of taxable property, $1,000,000.

The above is to the best of my knowledge a correct report.

Very respectfully,
Your obedient servant,

JOHN F. PINKHAM,
Assessor Santa Cruz County.

OFFICE COUNTY ASSESSOR,
Shasta, —— ——.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

In compliance with your Circular, and in conformity with an Act passed on the 17th April, 1851, I transmit the following information:

There was raised in this county in 1854—

	Acres.	Bushels.
Wheat	1,207	27,509
Barley	2,862	58,836
Corn	127	2,663
Oats	76	3,622
Potatoes	96	7,661
Totals	4,368	101,391

And in 1855 there was raised—

	Acres.	Bushels.
Wheat	2,898	65,378
Barley	2,995	74,885
Corn	203	5,143
Oats	239	4,956
Potatoes	142	14,780
Totals	6,477	165,142

Increase over last year in cultivation, acres	2,109
" " " bushels	63,751
Hay cut, tons	1,763

Cotton, staple short but very fine; yield, two hundred pounds, ginned, to half acre.

FRUIT TREES.

	Number.
Apricot	84
Apple	1,876
Peach	3,247
Pear	266
Plum	63
Cherry	35
Figs	36
Almonds	26
Quince	1,062
Olive	3
Grape-Vines, mostly two years old	5,447

The ages of these trees are from one to three years old.

LIVE STOCK.

Horses	790
Mules	1,097
Jacks	35
Cows	837
Calves	1,023
Oxen	1,086
Sheep	175
Goats	15
Swine	3,717

Value of poultry, $5,680. Value of animals slaughtered, $97,000.

MILLS.

Twelve saw mills—original cost, $58,800 ; expense of running per day, $226 ; amount of lumber sawed per day, 24,000 feet ; value, $45 per thousand.

Two steam grist mills—original cost, $85,000 ; engines, one hundred horse power ; six run of stone ; number of barrels per month, 2,044 ; expense of running per month, $7,000.

Two quartz mills, cost $40,000 ; but one at present in operation. Tuns of quartz crushed per month, one hundred and eighty ; cost of running per month, $1,680 ; yield per month, $5,400.

We have one Artesian well nearly completed ; at present it is ninety-three and a half feet deep, fifty-two feet water, size of bore six inches. The different stratas gone through are as follows : red clay, two feet ; gravelly boulders intermixed with red clay, seventeen feet ; white clay, three feet ; hard sandstone, three feet ; white clay, five feet ; alternate layers of soft sandstone and clay, fifteen feet ; white clay, two and a half feet ; hard sandstone, two and a half feet; white clay, fourteen feet ; washed sand, one and a half feet ; gravel, two feet.

The above is as correct a statement of the statistics of our county as I have been able, by diligent inquiry, to obtain.

I remain, respectfully,
Your obedient servant,

WM. S. HUGHES,
Assessor of Shasta County.

Downieville, Sierra County,
October 27th, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In compliance with your instructions, I beg leave to make the following report:

There are three hundred and nineteen acres of land under cultivation in this county, which, you will find by comparing with my report of last year, falls short of the number of acres under cultivation at that time. The reason of this is, that a portion of this county, known as Sierra Valley, was included in my report of last year, and this year it is claimed to be a portion of Plumas County, consequently it has been left out of my report altogether this year.

The County Surveyor has, probably, reported to you the undefined condition of the lines of this county on the north, west and south. The interests of this county, and of the inhabitants of the districts in dispute, require that these lines should be properly defined as soon as possible. The northern line, dividing this and Plumas County, is not sufficiently defined in the Statutes to enable a Surveyor to run it, for the reason that the Statute calls for a line that does not exist. It calls for a line running from the Lexington House in a northerly direction, following out said ridge, (the ridge dividing the waters of the Yuba and Feather rivers,) thence easterly to the State line. Now, the ridge here spoken of runs in a south-easterly direction, and if followed out, it would run the line to the north-east corner of Nevada County, cutting in between this county and the State line.

The principal agricultural productions of this county are potatoes, turnips, carrots, beets, radishes, cabbages, melons and squashes. The soil, when properly irrigated, produces Indian corn, wheat, oats and barley, but these are not cultivated to any extent, owing to the lack of facilities for irrigating.

There are about three hundred peach trees in this county, some of which commenced bearing this year for the first time. I have seen specimens of the fruit, equal in size and flavor, not surpassed by any grown in any part of the State.

There are also several hundred apple and pear trees growing, which are in a very thrifty condition, but none of them have commenced bearing yet. The climate and soil seems remarkably well adapted to the culture of these fruits.

Grape vines, also, grow well, but none having commenced bearing, I am not prepared to say what quality or quantity they will yield.

This being entirely a mining county, its agricultural resources have been neglected, but in all cases where this branch of industry has been properly applied, it has yielded a rich harvest.

	Number.
Mules	948
Horses	89
Cows	214
Hogs	1,571
Jacks and Jennies	27
Beef Cattle	162
Sheep	314
Calves	46
Goats	13

Of timber, there is found in this county, in great abundance, the pine, fir, cedar, hemlock, yew, live oak, black oak, alder and manzanita.

There are now in operation twenty-five saw mills, valued at $93,000. The amount of lumber cut within the last year, I have no means of ascertaining.

There are seventy-eight ditches and flumes in the county, the aggregate value of which is $389,000. There are, in addition to these, about fifty more in course of construction, that will be completed within two years, the cost of which will not be less than $1,500,000.

The assessed value of taxable property in this county, this year, is $1,484,560.

I know of no lands in this county belonging to the State.

All the land in this county is mineral land. The mineral produced is principally gold, but I have no means of making anything near an accurate estimate of the amount produced within the last year. For a description of the localities in which gold is found, I refer you to the whole county.

There is but one quartz mill in this county; value, $8,000. No grist mills.

There are two toll bridges in this county. No ferries.

My report is not as full as it should be, but I have used all the means at my disposal to procure the proper statistics, but in the mining counties the population is so transient, business of all kinds so unsettled, it is impossible to gather correct statistics.

Of the amount of live stock reported above, this only includes the amount on hand at the time I assessed the county. There are, probably, from 1,500 to 2,000 beef cattle butchered annually in this county, but they are driven in small lots from the lower counties, and butchered as soon as they arrive; also, large numbers of sheep and hogs are driven into this county and butchered, and no account is made of them.

As miners are not accustomed to keeping an account of the amount of gold produced in a year, and farmers do not keep any reliable account of the amount of agricultural productions, it is impossible to obtain reliable statistics.

I have delayed my report several weeks, trying to get a correct estimate from bankers and merchants, of the amount of gold produced during the last year, but have failed to obtain one that I would vouch for as correct.

Very respectfully,

FRANCIS M. PROCTOR,
Assessor Sierra County.

Benicia, Oct. 24, 1855.

Hon. S. H. Marlette, Surveyor-General:

Dear Sir:

In obedience to your instructions, I beg leave to make the following report:

The area of the county is about nine hundred square miles; 110,000 acres of land subject to overflow; 155,000 acres mountain and hill land; 310,000 acres valley land; 175,000 acres suitable for cultivation, and 135,000 acres suitable for grazing purposes.

There are about fifty-five miles of boundary that should be surveyed as soon as possible, forty miles between Napa and Solano, and fifteen miles between Yolo and Solano. The whole number of acres in cultivation is 16,707; in wheat 7,264 acres; barley, 5,202 acres; oats, 721 acres; Indian corn, 724 acres; broom corn, 150 acres. Horses, 2,945; mules, 278; cattle, 22,179; hogs, 16,415; sheep, 14,279; goats, 162. Grape vines, 56,178; peach trees, 7,039; apple trees, 1,087; pear trees, 756; apricots, 560; figs, 224; quince, 147; olive trees, 1,000; locust trees, 2,000; 4,575 tuns of hay.

There are three steam grist mills, but I could not ascertain the amount of flour manufactured during the year, probably 30,000 bbls.

There have been two Artesian wells commenced to be bored in this county, but neither of them have been completed as yet. The one at Suisun City has been bored to the depth of three hundred or four hundred feet, the other at the residence of Mr. A. P. Jackson, has been bored about one hundred and thirty or one hundred and forty feet, and contains good water, but does not overflow. I have not been able to get a more full description of these wells.

H. B. AMMONS,
Assessor Solano County.

SANTA ROSA, Sonoma County,
October 1, 1855.

Hon. S. H. MARLETTE, County Surveyor:

SIR:

The information desired by you, as set forth in your circular to County Assessors of March 1, 1855, I have endeavored to collect as faithfully as possible, and in conformity with section nine of an Act of the Legislature passed April 17, 1850. The result of my labors is respectfully submitted in the following report:

LAND INCLOSED.

The quantity of land inclosed in this and Mendocino Counties amounts to 37,052 acres, about 22,400 acres of which is in the cultivation of the following products:

The number of acres sown in wheat is 12,233, of which amount 3,500 acres only (mostly from Chili and Oregon seed,) is good, or but very slightly affected with rust, and will average twenty-two bushels to the acre, making a total of 77,000 bushels. The remainder, or 8,733 acres, (club-head seed,) was entirely destroyed, or nearly so, by the rust, and but a small portion was ever harvested. Some of our farmers are of the opinion that the Australia wheat is the most suitable for our climate; it is, however, very liable to become smutty, which can be remedied by soaking the seed in a solution of blue vitriol, for ten or twelve hours before sowing. The experiment has been tried with perfect success.

BARLEY.

The number of acres sown is 1,561, and will average thirty-two bushels per acre, making 49,952 bushels; in some localities the cheat has destroyed some few fields. With this exception the grain is good.

OATS.

Number of acres sown, 3,268. Average yield, thirty bushels per acre, which gives a total of 98,040 bushels. This grain, also in the immediate vicinity of the coast, was slightly affected with rust.

CORN.

The number of acres planted in corn is seven hundred and fourteen, mostly in Russian River and Dry Creek Valleys, where it seems to flourish well. The crop will average forty bushels per acre; total, 28,560 bushels.

RYE.

Of this grain there was only a small quantity sown, ten or twelve acres, merely an experiment.

BUCKWHEAT.

Number of acres, ninety-nine; seems well adapted to our soil, and will yield, say twenty-two bushels per acre, giving a total of 2,778 bushels.

PEASE.

Number of acres, one hundred and fifty-six. Average yield, thirty bushels per acre. Total, 4,680 bushels, mostly raised for hog feed.

BEANS.

Number of acres, one hundred and seventy-seven. Average, twelve bushels per acre, making 2,124 bushels.

IRISH POTATOES.

The quantity planted of this product is 1,693 acres, against 2,600 last year; will not yield more than forty sacks per acre, making 67,720 sacks of one hundred and twenty pounds each. Of this amount, at least one-half will be destroyed, or rendered unfit for market by the worms, which made their appearance about the first of September.

GARDEN VEGETABLES.

Pumpkins, melons, turnips, beets, onions, etc., and almost every kind of garden vegetables, are raised in abundance. I cannot give the quantities, as nobody pretends to keep any account of them.

FRUIT TREES.

There are 6,730 fruit trees, set out mostly young, from one to three years old, comprising many varieties of apple, pear, peach, plum, cherry, fig, quince, apricot, etc. About one-third of the number have commenced bearing, and next year much fruit is anticipated.

VINEYARDS.

We have a number of fine vineyards, numbering in the aggregate some 24,800 vines, many of which are loaded with grapes. The estimated quantity gathered last year was fifty tuns. The present season it will be more than doubled.

CATTLE, HORSES, ETC.

	Number.
American Cattle, Milch Cows	3,350
Dry Cows	2,575
Calves	5,750
Work Oxen	2,771
Beef Cattle	1,922
Yearlings	4,294
California Cattle	3,583
Total number of cattle, (American and Californian)	26,250
Gentle Horses, American and Spanish	3,708
Wild California Horses	1,250
Total	4,958
Mules	323
Hogs	19,459
Sheep	7,065
Goats	75
Jacks	5
Hay, number of tuns cut	800
Wool, mostly from Spanish sheep, pounds	14,500

BUTTER, CHEESE, ETC.

In regard to the articles of butter, cheese, eggs, chickens, etc., I found it impossible to collect any correct information, as but few, if any farmers keep an account of the amount they sell, or the average price of the same. The dairy business,

however, is carried on to some considerable extent, as can be seen by the annexed statement of the quantity and value of these articles received by one firm in San Francisco from the town of Petaluma, during the month of August.

	Pounds.	Value.
Butter	12,767 at 72c.	$9,192 24
Cheese	2,787 " 19¼c.	537 72
Eggs	3,460 dozen at 61c	2,110 60
Chickens	1,437 at 63c.	905 31
Total value		$12,745 87

In addition to the above, there are considerable quantities shipped by other parties in Petaluma, Sonoma and Bodega, sufficient to swell the amount to $20,000 per month, or $240,000 per annum.

There are three steam saw mills, and five water mills, capable of sawing 110,000 feet of lumber every twenty-four hours. The principal kind manufactured is red-wood. One steam grist mill, with two run of stone, capable of manufacturing seventy-five barrels of flour every twenty-four hours; the original cost, about $6,500; and five water mills, capacity one hundred barrels every twenty-four hours.

RECAPITULATION.

	Acres.	Average yield.	Bushels.
Land inclosed	37,052		
Lands in cultivation	22,400		
Wheat	3,500	22	77,000
Barley	1,561	32	49,952
Oats	3,268	30	98,040
Indian Corn	714	40	28,560
Rye	10		
Buckwheat	99	22	2,178
Pease	156	30	4,680
Beans	177	12	2,124

Potatoes, 1,693. Number of sacks sound, twenty. Total sacks, 33,860.

CATTLE, ETC.

	Number.
Milch Cows	5,350
Dry Cows	2,575
Yearlings	4,294
Calves	5,750
Work Oxen	2,771
Beef Cattle	1,922
California Cattle	3,583
Total	26,250
Horses (gentle,)	3,708
Horses (wild,)	1,250
Mules	323
Jacks	5

	Number.
Sheep	7,065
Goats	75
Hogs	19,459
Wool (pounds,)	14,500
Hay, tuns cut	800

Steam saw mills, three. Water saw mills, five. Amount of lumber sawed every twenty-four hours, 110,000 feet.

Steam grist mills, one. Water grist mills, five. Amount of flour ground in twenty-four hours, one hundred barrels.

Very respectfully,
Your ob't servant,

SMITH D. TOWNE,
County Assessor.

STANISLAUS COUNTY, Nov. 10th, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

In compliance with your circular, I will state that the amount of land under cultivation in this county, is 6,982 acres.

	Acres.
Wheat	3,684
Barley	2,231
Oats	420
Corn	147
Gardens	500

Fifteen bushels of wheat per acre; total amount of wheat, 55,260 bushels.
Twenty bushels of barley per acre; total amount of barley, 44,620 bushels.
Amount of hay, 1,500 tuns.

LIVE STOCK.

	Number.
Cattle	9,937
Horses	1,210
Sheep	3,747
Hogs	1,416
Goats	100

There are eight hundred and thirty-seven fruit trees. Also, four hundred and forty-nine grape-vines.

Number of men at work in mines, two hundred and fifty.

Amount of gold produced per annum, $225,000.
One grist mill, (one run stone.) Also, one saw mill.
Number of ferries, fifteen.
The above is a true statement, according to the information acquired by me while assessing the county.

Your obedient servant,

E. B. BEARD,
Assessor Stanislaus County.

NICOLAUS, SUTTER COUNTY,
October 31st, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

I herewith send you the required report, and which is as follows, to wit:
The number of acres of land in this county is unknown. The overflowed land, and the land subject to overflow, lies between the Feather and Sacramento Rivers.
The timber in this county consists of oak, of an inferior quality, with the exception of that on the Sacramento River.

LIVE STOCK.

	Number.
Cattle	15,180
Horses	1,200
Mules	607
Hogs	7,235
Sheep	2,521

AGRICULTURAL PRODUCTS.

	Bushels.
Barley	314,080
Wheat	15,800
Oats	1,207
Potatoes	21,100

	Pounds.
Cabbages	1,000,000
Onions	28,195
Butter	7,180
Cheese	3,000

The above and foregoing is as near correct as can be ascertained.

Respectfully yours,

G. W. DURKEE,
Assessor Sutter County.

Weaverville, Sept. 21st, 1855.

Hon. S. H. Marlette, Surveyor-General:

Sir:

Inclosed I send you the statistical reports (of inquries you wished in your circulars) in this county. It was quite difficult obtaining the information as complete as I would like, but such as I send is correct—although I would like to have made a more full report:

Statistics of Trinity County for 1855.

Agricultural lands, capable of cultivation, 10,755 acres.

Swamp and overflowed lands—swamp, seventy-five acres; overflowed, one hundred and eighty acres.

In cultivation, 2,900 acres.

Adapted to grazing, 104,827 acres.

Mining and gold in every portion of the county.

Claims located, 24,849.

Different kinds of timber—pine, four varieties; oak, three varieties; ash, wild cherry, alder, madronia, yew, cedar, birch, balm gilead, manzanita, soft maple and willow.

GRAIN, ETC.

	Acres.
Wheat	848¾
Barley	655¼
Oats	125¾
Corn	64¾
Pease	3
Beans	6
Potatoes	360
Turnips	20
Onions	23
Melons	38
Cabbages	35
Pumpkins	5
Beets	4
Carrots	7
Clover and timothy	63

FRUIT.

Number of fruit trees, 2,791. Kind of fruit—

Apple	1,264
Pear	465
Peach	762
Plum	200
Cherry	100

LIVE STOCK.

	Number.
Horses	125
Mules	713
Jacks and Jennies	75
Milch Cows	200
Oxen	125
Calves	83

Beeves slaughtered, average, per year, 3,000.

INCORPORATED FERRIES.

Whole number, thirteen; cost $7,300; income, per year, $3,950. Bridges, three, (two not completed); one cost $7,000; income, per year, $4,000.

SAW MILLS, ETC.

Whole number of saw mills, fifteen; cost $63,074; amount lumber sawed yearly, 2,695,000 feet; expenses running per year, $90,000; value of lumber, $188,650.

There is also one grist mill; cost $5,000.

Gold dust bought, yearly, 78,000 ounces. Platinum, some little.

Number of miles of ditches and flumes, for mining purposes, two hundred and forty-seven and a half.

The whole of the county boundaries are unsurveyed.

Respectfully yours,

D. W. POTTER,
Assessor Trinity County.

VISALIA, August 14, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

In answer to your communication, dated Sacramento, June 1st, 1855, and other similar communications received from you, I would respectfully submit the following report from Tulare County:

Tulare County contains about 1,600 square miles of agricultural land, of as good an average quality as can be found in any other part of this State.

Amount of cultivated land, 2,750 acres.

	Acres.
Wheat	1,500
Barley	1,000
Corn	200
Oats	30
Potatoes and Vegetables	20

LIVE STOCK.

	Number.
Horses	487
American Cows	856
Other Cattle	2,778
Goats	1,000
Sheep	856
Hogs	1,397

Amount of taxable property, $438,000.

There are now about two hundred and fifty miners on and in the vicinity of Kern River. A large proportion are turning their attention to quartz mining, and it is the opinion of those best acquainted with this branch of mining, that the quartz leads in that vicinity exceed, in number and richness of ore, those to be found in the same extent of territory in any portion of the State. I have examined them myself, and fully agree in the above statement. Some of the placer diggins also pay well.

In relation to county boundaries, I would say, there is a portion of the southern boundary of this county, (about fifty miles in extent,) which is very indefinite from the fact, that many of the ranchos, the boundary lines of which are made the boundary between this and Los Angeles County, are mentioned in the Statute by names by which they are not at present known. Consequently, a dispute has arisen between this and Los Angeles County, with regard to a large extent of territory, including Fort Tejon, Frenche's Rancho, and other territory. Assessments have been made by both counties in the above disputed territory, and some difficulty is likely to ensue in regard to collection of taxes. The amount necessary to run this line would not, probably, exceed $1,000; and it is an object of the greatest importance, both to Los Angeles and Tulare Counties, that this line should be run as soon as possible. The summit of the Coast Range would probably be the best natural line between the two counties, and seems intended by nature for some such purpose. I would particularly call your attention to this boundary question.

There are some other matters which perhaps ought to be mentioned in this report, but which I have not the necessary statistical information to present properly. I would therefore respectfully submit the above.

Your obedient servant,

J. B. HATCH,
Assessor Tulare County.

County of Yolo, August 5, 1855.

Hon. H. S. Marlette, Surveyor-General:

Sir:

I embrace this as the first favorable opportunity of acknowledging the reception of your circular, bearing date March the 1st, and also of transmitting to you an account of the resources of this county. And I am sorry to say that the data from which I have to report is not so satisfactory as I could wish.

COUNTY BOUNDARIES.

The exact topography of this county is not clearly ascertained, as there has been no actual survey made of county lines, hence these must be imaginary. Puta River constitutes a part of the southern boundary, the Sacramento the eastern, there being no natural objects to designate the northern line, it being wholly imaginary, the summit of the Coast Range taken for the western boundary. The necessity of a proper adjustment of county boundaries and county surveys are too obvious to need comment. The probable area of this county might be placed at 370,000 acres. This, however, can only be considered as approximation. Of this there are 150,000 acres of arable land, the fertility of which is not surpassed in the State. In evidence of this, with proper culture it has been made to yield of the various kinds of grain, an average of forty bushels per acre.

There is of State, or unproductive lands, 20,000 acres; of tule lands, 80,000 acres. The reclamation of these lands is in my opinion questionable, situated as they are, contiguous to the Sacramento River, and occupying as they do a locality still lower than that of the river, would render it impossible by means of dyking. And even if the annual overflow of the Sacramento could be prevented by means of embankments, the inundations produced by Cache Creek and Puta, which streams emanate in the Coast Range, could not well be disposed of. It is needless to add, that these are the most fertile lands in the State, and a reclamation of them is much to be desired. The remaining portion being 120,000 acres, comprises the western and mountainous portion of this county, and is peculiarly adapted to grazing purposes.

As to the mineral resources, there have been no discoveries made, leading to the belief that there are any mineral lands within this county. There have been no geological investigations made to throw any light on that head.

PUBLIC LANDS.

It is not truly known whether there are any public lands in this county or not, but it is generally believed that all of the arable lands are occupied by Spanish grants, which has greatly retarded agricultural pursuits.

MACHINERY AND WATER PRIVILEGES.

Sacramento and Puta are the only streams affording water privileges for driving machinery, there being at this time a flouring mill on each one of these streams, at which is manufactured annually 3,000 barrels of flour each.

There are no lumber mills, although the facilities for erecting are good enough. But the great scarcity of timber would render the enterprise useless, and this might be reckoned one of the chiefest calamities under which our county labors.

BRIDGES.

The bridging of the above named streams is very practicable, and can be done at small cost—considering the great inconvenience of getting lumber, which would have to be brought from Nevada Mountains, a distance of seventy-five miles, the price being four cents per foot. There is not a bridge in this county. There is what is styled a Plank Road Company, which has been partially constructed across the tule opposite the town of Washington, but to very little purpose, as ferry boats have to be used during the winter season. At this point the establishment of a good road is indispensable, and of vital interest to the county.

AQUEDUCTS.

There are no water deposits in this county, no means of irrigating aside from what naturally exists; no Artesian wells; and this last is in my opinion the most practical method of irrigating, the which is indispensable to the production of certain crops, such as vineyards, and especially team grasses cannot be produced without it. I do know of one or two persons who are raising water from the river by means of machinery, but this is a lasting tax, and inconvenient.

TIMBER TREES, ETC.

The native tree is the oak, cotton-wood and pine, but none are adapted to building purposes, being of a dwarfish and scrubby nature. The production of ornamental, and in short, of any kind of trees, seems as far as has been tried, quite practicable.

VINEYARDS.

The whole number of vineyards amount to two hundred, many, however, are quite young, and none producing. These have suffered severely from the swarms of grasshoppers that visited us during this summer. Crops of all kinds have suffered severely from this devouring host, and some irreparable losses have been sustained. A mode to provide against the desolating effects of these insects would be of infinite importance. In consideration of the above cause, the production of the present year will fall much short of the usual amount. I will here append a list of the produce, as you require, for the present year:

PRODUCE.

	Acres.	Bushels.
Land inclosed	60,000	
" cultivated	40,000	
Wheat	15,000	600,000
Barley	20,000	800,000
Oats	3,000	120,000
Maize	300	9,000

	Tuns.
Hay	600,000

	Pounds.
Wool	200,000

	Pounds	Value.
Butter	50,000	
Cheese	10,000	$100,000
Eggs	200,000 dozen.	

	Number.
Horses	6,000
Cattle	25,000
Sheep	2,000
Swine	35,000

Poultry, 14,000, at $10,000.

ARTESIAN WELLS.

On the south side of Cache Creek, near the base of the mountain, in the vicinity of Buckeye and Cottonwood, and on the north side of the same creek, in the vicinity of Oak Hollow, it is believed that Artesian wells may be sunk to great advantage.

This completes the entire list of all that is cultivated in this county, to any extent worthy of notice, all of which I transmit to you with the greatest respect.

Yours, etc.,

D. R. DIGGS,
County Assessor of Yolo.

County Assessor's Office, Yuba County.

Hon. S. H. Marlette, Surveyor-General:

Sir:

In accordance with your request, as per circular dated March 1, 1855, I send you the following statistical report for Yuba County:

In the absence of the late County Surveyor, who is at present engaged in surveying a road through the Henness Pass, I have taken his statement made in 1852, of the number of acres of land in Yuba County.

Your circular was not received in time for me to report the amount of gold taken from the mines in this county, as a large part of the mining portion of the county had been assessed previous to the reception of your circular. I can only say, that from the best information that I can obtain, there has been more

gold taken from the mines situated in this county, during the present year, than any previous year since the first discovery of gold in this State.

In relation to the cultivation of fruit trees, I had the promise, but as yet have been unable to obtain, a report of the observations of Messrs. Beach & Shepard, who have a large nursery and orchard on the east bank of Feather River, between the Yuba and Bear Rivers. In their orchard most of the trees are three years old, and they would have had the present year a large yield of peaches had they not been destroyed by that pest of California, the grasshopper.

From my own observation, I think the climate of this portion of the Sacramento Valley not adapted to the cultivation of the apple and pear, but think they may be cultivated to advantage in the small valleys among the lower spurs of the Sierra Nevada Mountains.

There is some portion of the boundary lines of this county that are not plainly defined, and which, in my opinion, should be surveyed and more plainly established. The Act of the Legislature dividing the State into counties, and establishing the boundaries thereof, defines the boundary line between Yuba County and Plumas and Butte Counties, as commencing at the Lexington House; thence down the dividing ridge, between the waters of the Yuba and Feather Rivers, to the source of Honcut; thence down the middle of the main branch of Honcut Creek to where the same empties into Feather River.

The South branch of the Honcut has heretofore been considered as the main branch, but I have been informed by two of the Deputies of the United States Surveyor-General of this State, that the north branch of said creek is the main branch; and if such is the fact, Yuba County is losing the revenue upon a large amount of property situated between the two branches. Your attention is respectfully solicited upon this subject.

Below I send you such statistics as I have been able to collect during the past year.

LANDS.

	Acres.
Whole number of acres, estimate of County Surveyor	552,960
Susceptible of cultivation	280,000
In actual cultivation	18,000
Suitable for grazing	80,000
Mineral lands, unsusceptible of cultivation, and mostly heavily timbered	174,960

GRAIN, ETC.

	Acres.	Bushels.
Wheat	1,845	36,900
Barley	2,199	54,975
Oats	220	4,400
Corn	35	1,400

Tuns of hay, 2,733.

Number of fruit trees, 8200. Vines, 17,000.

LIVE STOCK.

	Number.
Horses	1,272
Mules	1,074
Cattle	6,045
Sheep	805
Hogs	5,378

MILLS.

Number of saw mills driven by steam, six. Assessed value of the same, $19,500.

Number of saw mills driven by water, sixteen. Assessed value of the same, $38,600.

Amount of lumber manufactured during the past year, 3,875,000 feet. Cost per thousand to manufacture, fifteen dollars; value per thousand, twenty-five dollars.

One flouring mill, propelled by water. Value $3,000.

Amount of flour manufactured in five months, one hundred and fifty tuns. Average yield of flour per bushel, thirty-nine pounds.

Number of flouring mills propelled by steam, five. Assessed value of the same, $44,000.

Number of bushels of wheat ground during the past year, 69,406. Number of bushels of other grain ground, 26,456.

In the above mills there are twelve run of stone.

INCORPORATED TURNPIKE COMPANIES.

Number of, two. Cost of construction, $35,000.

Yuba Turnpike Co.—From Marysville to Camptonville; length, forty miles.

Branch Turnpike Co.—From Oregon House to Lexington House; length, thirty-one miles.

TOLL BRIDGES.

Number of, seven. Assessed value, $48,000.

FERRIES.

Number of, eight. Assessed value, $7,500.

WATER DITCHES.

Number of, eighteen. Assessed value, $117,400.

QUARTZ MILLS.

Number of, two. Assessed value, $31,000.

FIRE COMPANIES.

Number of, five. Cost of engines and hose carriages, $16,725.

Number of members of Fire Department, October 1st, 1855, two hundred and thirty-one.

Expenses of Fire Department of the City of Marysville during the past year, $18,457 76.

Very Respectfully yours,

MIX SMITH,
Assessor Yuba County.

APPENDIX F.

1. REPORT OF WM. PATTON, OF CALAVERAS COUNTY, CIVIL ENGINEER.

CAMPO SECO, Dec. 14, 1855.

Hon. S. H. MARLETTE, Surveyor-General:

SIR:

At your request to contribute something to the Appendix of your report, I have the honor to forward the inclosed documents, which are the best results, in the limited time given, that my circumstances allowed.

No. 1, gives some statistical information upon works of public utility in Calaveras County. You owe acknowledgments to R. F. Wheeler and J. K. Doak, Esqs., for valuable assistance thereto.

No. 2, contains a map, or reconnaissance, and report, of an exploring expedition, from Murphy's Camp, in Calaveras County, to the head of Carson Valley *via* Chevron's Pass, in the month of August last. This document was drawn up, and the map executed, by Fra. A. Freeman, Esq., of Murphy's, one of the party, from the general notes, and examined and indorsed by Judge Noyes, also of the party, of the same place, as being as correct as the circumstances allowed.

No. 3, contains a contribution, consisting of a diagram and subject-matter, upon a general and comprehensive internal system of railways for our State, with a view to assist in developing the most rapidly the manifold resources of the mountains, and aid the prosperity of the country in general.

[DOCUMENT NO. 1.]

The following tables give a nearly accurate list of the works of public utility in Calaveras County:

Table No. 1.—*Saw Mills.*

The column H. P., gives the number of horse-power of the engine employed; P., indicates by the letter S. or W. whether the power employed be steam or water; and column C., shows the utmost capacity in superficial feet of lumber, the establishments, as at present installed, can throw off per twenty-four hours; and if we take one sixth of the whole, a tolerable near estimate may be formed of the quantity of lumber consumed, per day average, in Calaveras.

SAW MILLS.

NAMES.	Locality.	H. P.	P.	C.
Mokelumne Hill Canal Company.	Glencoe	25	S	20,000
J. K. Doak & Co.....	Murray's Creek .	16	"	10,000
N. T. Norcross & Co.....	Willow Creek ..	12	"	8,000
Wm. Irvine & Co.*.....	El Dorado	40	"	9,000
Wm. H. Hanford & Co.....	Angel's Creek ..	25	"	20,000
Grant & Co	Jesu Maria.....	6	"	3,000
Henry Schabonell	Calaveras.....	12	"	9,000
Benson & Co.	San Antonio ...	10	W	4,000
McCuen & Co.....	Jesu Maria Creek	10	"	4,000
J. McNaughton & Co.	Stanislaus River.	8	"	3,000
San Antonio Water Company....	San Antonio ...	8	"	4,000
W. H. Hanford & Co.	Murphy's	12	"	6,000
Union Water Company.....	Angel's Creek ..	10	S	3,000
Brady's Mill, (grist and flouring)†	Mokelumne	8	"	2,500

* Capable of augmentation.
† Brady's, is the only Grist and Flouring Mill, within my knowledge, in Calaveras County.

Table No. 2.—Bridges and Ferries.

BRIDGES.

LOCALITY.	Form of Construction.	River.	Estimated Value.
Winter's Bar.....	Wire Suspension	Mokelumne	$15,000
Negro Cañon.....	Howe's Truss.....	"	14,000
Middle Bar	King's Patent Truss .	"	28,000
Big Bar.....	" " .	"	18,000
Silver Mountain.....	Beam	"	3,000
Madina.....	"	Calaveras.....	4,000
Foreman's	"	"	3,000
Scott's	"	"	2,500
San Antonio	"	"	500
Stevenson's		"	8,000

FERRIES.

NAMES.	Locality.	Estimated Value.
Clay's Bar	Mokelumne	$2,000
Poverty Bar	"	4,000
Arkansas	Campo Seco, Mokelumne	1,800
White's Bar	White's Bar, "	6,000
Reed & Co.'s	Stanislaus	20,000
Reynold's	"	20,000
McClain's	"	15,000
Pine Log Crossing	"	2,000

Table No. 3.— Water Companies and Mining Canals.

NAMES.	Water From.	Miles long.	Estimated Cost or Value.
Mokelumne Hill Canal and Mining Com.	S. F. Mokelumne	60	$460,000
West Point Ditch	N. of M. F. "	12	14,000
Cadwalader's "	" "	7	8,000
Sandy Gulch "	M. F. "	8	9,000
Rich " "	N. F. Calaveras	9	10,000
Whisky Slide "	Calaveras	8	14,000
Table Mountain Ditch	San Antonio	15	22,000
San Antonio Branch Ditch		9	12,000
Calaveras & Camanche "	N. F. Calaveras	25	13,000
Union, San Andreas	Murray's Creek	14	13,000
Pope's Ditch, San Andreas	Willow Creek	5	9,000
North Branch	Murray's Creek	3	2,500
San Antonio Water Company	San Antonio	18	25,000
Union Water Company, Murphy's	Stanislaus	78	320,000
Eureka "		14	22,000
Albany Flat & Carson's		8	15,000
San Domingo Ditch		7	10,000
Vallecito "		4	6,000
Cayote Creek Water Company		5	8,000
Isabell, Jeffries & Co.		5	4,000
Forman's Ditch	San Antonio	14	20,000
Add an aggregate for several other short paying ditches not denominated		40	14,000

[Document No. 2.]

Murphy's, Dec. 2, 1855.

To William Patton, Esq.:

Dear Sir:

Judge Putney, of this place, mentioned to me that you wished to procure an authentic account of the proceedings and explorations of the party who, last August, crossed over to Carson Valley to find a commodious and eligible immigrant road.

In furtherance of the matter, I applied to Mr. L. W. Noyes, from whose notes and memoranda the statement we send herewith is taken.

We also transmit a map of the route, which has been examined and approved by all the party, and is as nearly accurate, probably, as the circumstances, (that no measurement of hights and distances could be made,) will admit. The map and report will explain each other.

I am,
Respectfully yours,

FRA. A. FREEMAN.

SOME ACCOUNT OF THE EXPLORING EXPEDITION.

On the eighth of August last, an exploring party, consisting of six citizens of Murphy's and Douglas', left the former place to find and examine an eligible route over the Sierra Nevada, to connect with the immigrant road through Carson Valley.

The results of the expedition, as briefly stated below, are given from the memoranda and minutes of Mr. Leonard W. Noyes of Murphy's, one of the most active and persevering of the party, and the strict accuracy of whose statements may be confidently relied upon.

It should be premised that the design of the party being rather to explore than to survey the route, they were unprovided with instruments proper for the latter purpose, and that the estimates of hights and distances are based upon such observations as could be made without such instruments.

2. REPORT OF L. W. NOYES, ESQ., OF THE CALAVERAS EXPLORING EXPEDITION.

From Murphy's to the Big Tree the road is familiar to most denizens of this and the neighboring counties, as a commodious and pleasant one, and having its terminus at one of the greatest curiosities of Nature.

The distance of the Mammoth Grove from Murphy's is fifteen miles, by actual measurement, in a north-easterly direction. The road thence proceeds in nearly the same direction (north-east) about eight miles, to a hill some half mile beyond the new steam saw mill of the Union Water Company.

For two miles further on, the present road, after a rather abrupt ascent, passes upon the ridge of the hill to Black Springs, a fountain affording pure and very cold water in great abundance throughout the year.

The present road thence proceeds northerly one and a half miles, then east one

mile; thence east north-east two miles, to the Big Meadows. Then the road makes a descent corresponding with its rise this side of Black Springs.

It should be observed that at the outlay of a little labor, a good and level road may be made upon the southerly side of the hill, which would avoid the ascent and descent before mentioned.

The "Big Meadows" upon which is the rancho of Messrs. Smith & Co., is some fifteen miles distant from the Big Tree. The "meadow" is six miles in length and about half a mile in width. The road enters it about the center and proceeds to the head of it, following the course of one of the tributaries of the Stanislaus River. A branch of the Mokelumne also heads into this meadow.

We here reach the end of the traveled road, at a distance of thirty-one miles from Murphy's, and cross a small spur of the divide between the Mokelumne and Stanislaus Rivers, thickly timbered with pine, and having an elevation of one hundred feet above the meadow, and a very easy grade on both sides.

Here the party descended into a valley (to which they gave the name of "Grizzly Bear Valley," and which is so designated on their map) abounding in grass and water, notwithstanding the extreme drought of the season. The valley is above five miles across in every direction, being nearly circular in form, and is watered by another branch of the Stanislaus which heads in it.

The valley was traversed in a north-easterly direction three miles, and after a rise of about one hundred feet upon a spur of the divide above mentioned, the meadow named by the party "Silver Valley" was entered on the south-west side. Thence for eight miles their route proceeded upon a level, through a continuous meadow, along the base of the divide, crossing many little brooks that all run into the Stanislaus.

A choice of roads is here offered, neither of which presents any serious obstacle.

An easy ascent of about fifty feet brings the traveler upon the main divide between the Stanislaus and Mokelumne Rivers, upon which is a small lake of pure water.

Thence descending about three hundred feet on an easy grade, and following a branch of the Mokelumne for little more than half a mile, the road crosses it, where a bridge of some two rods in length would answer for all seasons.

Immediately after this crossing, a level bench upon and around a rocky hill, may be turned to advantage. At the distance of a mile Mokelumne Valley is reached, (so named by the expedition), where a small bridge of a rod in length will be required.

Leaving this valley in a westerly direction, and following a curve line round a hill for about a mile, the first summit is reached, the course being north-east, and continues in that direction over an incline and through a flat thickly timbered. Here are several small lakes and abundance of grass.

Three miles further on is Indian Valley, at an elevation of about one thousand feet above Mokelumne Valley. This part of the road up the hill can be made upon a bench or shoulder of it, by removing some granite boulders which are thickly scattered about. The grade is an easy one throughout the entire distance.

Indian Valley is the largest the company found, and branches of the Mokelumne and Carson rivers head into it. An Indian trail leads down by a branch of the latter, over which the explorers found no difficulty in driving their pack mules to a pass which is supposed to be the lowest in the Sierra Nevada. It must be mentioned that it falls off nearly perpendicular, and considerable labor will be required to make a track upon the north side.

Indian Valley was left about two miles east of where the party entered it, and proceeding north three miles through a thick timber and between two small lakes, marked "Twin Lakes" on the map, up Charity Valley to the main or summit pass, at an elevation of not more than one hundred and fifty feet above the level

of Indian Valley. Near this pass to the east (Monument) is a high mass of conglomerate rock, jutting out from the side hill, and having the appearance of an artificial monument, and serving as a noticeable land-mark. It was estimated to be between one hundred and fifty and two hundred feet in hight.

The pass must be some hundreds of feet lower than the summit of the pass on the Hangtown Road, as Messrs. Noyes and Capron followed that road to an elevation far above the pass, to which the exploring party gave the name of the Governor elect.

From this—the main or summit pass—the traveler descends about one hundred feet, and enters the westerly end of a valley or meadow about five miles long, to which the party gave the name of "Faith Valley." They traversed this valley about a mile, and leaving it upon the left or north side, descended a hill with an easy grade, perhaps two hundred feet in perpendicular measurement, and struck the head of Hope Valley, (well known by that name to the immigrant), and two miles distant from the Carson Road. Thence, and through Carson Cañon to the valley of the same name, is the usually traveled immigrant road.

It should be said, in conclusion, that the entire route explored every where abounds in grass and water, with plenty of timber at hand.

Some of the party, who have again crossed and re-crossed by the route since their first exploration, are satisfied that the minutes, and the map or reconnaissance based upon them, are as correct as may be without actual survey and measurement.

There is little doubt that the above offers the most eligible route for either a wagon or a rail road across the Sierra.

For any further information, recourse may be had to Mr. L. W. Noyes, at Murphy's.

FRA. A. FREEMAN.

The above account and map of our trip across the mountains, by Judge Freeman, is as nigh correct as may be without survey.

(Signed,) L. W. NOYES.

3. CONTRIBUTION OF WILLIAM PATTON, CIVIL ENGINEER, TREATING OF A GENERAL AND COMPREHENSIVE INTERNAL SYSTEM OF RAILWAYS FOR THIS STATE.

[Document No. 3.]

Facility of transportation, for internal commerce, is acknowledged to be the first great auxiliary to national progress.

Twenty-five years ago, common turnpike roads were found unadapted to modern improvement.

Every country is benefitted by the introduction of railways, more especially when arranged comprehensively.

California, physiologically speaking, is one of the finest and richest countries in the world; rich in gold mines, scarcely developed; brilliant in agricultural capabilities; full of material resources, of infinite kind, laying dormant; wealthy in capital, estate and labor, and filled with an energetic and speculative population—has neglected her surest means of more rapid advancement—her railway system.

From your general invitation, inclosed to me, in the second sub-section, Section

nine, of "An Act concerning the Surveyor-General," I make free to forward you a diagram and explanations upon the subject above adverted to, suggestive towards a design for a general railway system along the eastern margin of the great interior valley of this State, so as to comprehend the traffic of and with the gold regions.

I make no note of present legislative difficulties, but confine myself to economical and engineering views of the subject, with its attendant geographical conditions.

A main trunk line, marked A on the diagram, it is proposed may run along the foot hills on the eastern edge of the Sacramento and San Joaquin Valleys as far directly throughout the State, as the traffic may develop itself from time to time, which, for the present, we may suppose to extend from the foot hills, near Ophir, Butte County, on the north, to Empire City, Tuolumne County, on the south—a distance of about one hundred and fifty miles.

On this line, a great central station may be placed somewhere near the western boundary of Amador County, between the Cosumnes and Mokelumne Rivers, joining trunk lines at that point to Stockton and to Sacramento City, marked B and C respectively. These show the whole of the main trunk lines.

The line of railway, thus connecting Stockton with Sacramento, would measure about seventy miles in length, and be sufficiently direct to serve for purposes of traffic between the two cities, but their chief utility would, by this arrangement, consist in the equal availability of both to run to the northern or southern mines.

Branch lines, of which five would be sufficient in all, from the main line A, within the limits mentioned, would convey traffic, as far as practicable, into the mountains, and form distributing points at the termini of each.

The length of the branch lines, we may assume, would average fifteen miles each.

If we say, therefore—

150 miles of foot hill line, at $10,000 per mile, grading and plate laying, (single track,)	$1,500,000
70 miles Stockton and Sacramento line, at $10,000 "	700,000
75 " Sacramento branch line, at $14,000 "	1,050,000
Locomotives, carriages, stations, etc	1,200,000
Showing	$4,450,000

To be the cost total to execute a grand and useful work, actually needed by us, not amounting to more than a month's produce of the mines, for whose benefit it would and must most especially be preferred.

I give this estimate of cost of railways, executed according to the line shown in the diagram, merely to popularize the idea, so that, if not this, some other great railway system may be brought forward, and executed for the benefit of ourselves and our successors.

Fire wood, lumber, marble, granite and lime, alone, would soon form no inconsiderable item in the return trade to the valley, which, instead of importing, we would be in a position to export, with all that our mountains could yield of material wealth, thus gaining so much by keeping money, that would otherwise be lost to us, and tending to the retention of the produce of our gold mines among ourselves, to be used in developing our own resources.

I have the honor to be, Sir,
Your most obedient servant,

WILLIAM PATTON.

APPENDIX G.

1. NEW ENGLAND NURSERY.

The following communication "was prepared for the use of the Surveyor-General of the State," at the request of the gentleman to whom it is addressed, and is considered well worth a place in this report.

S. H. M.

"NEW ENGLAND NURSERY,
Marysville, Oct. 20, 1855.

MIX SMITH, Esq., Assessor of Yuba County:

DEAR SIR:

At your earnest request, and as per promise, we will give you a statement of our orchard and nursery operations, as also of our observations of the adaptation of the soil and climate of this section of the State to the culture of fruit, and the general method of treatment necessary to insure success. To go into every minutiæ it would require a book, but we will, in a condense form, endeavor to meet your wishes.

Our orchards and nursery grounds are situated on the east bank of Feather River, four miles southerly from the City of Marysville, on the stage road to Sacramento. Our orchard was set in 1853, being less than two years. The trees are three years from the bud and graft, and were grown by one of the partners, Mr. Shepard, who is a practical nurseryman, from New England. The buds and grafts were selected from bearing trees, which he had tested, and knew to be all true to their name—a result of most vital importance to nurserymen who are propagating trees for sale, for it is no uncommon thing for those who have set trees purchased at random, to find themselves sadly disappointed when their trees come into bearing. And every State should pass stringent laws against such bogus sales, for there is not the loss of money only, but loss of time, which cannot be redeemed. It costs no more to grow trees of the most choice varieties than it does the meanest scrub, while the fruit of the one is always in ready demand, and the other is a drug in market.

We have in the nursery a general variety of fruit and ornamental trees, shrubs and vines; the numbers it will be impossible to give. The number of fruit and ornamental trees may be near 20,000.

We are cultivating the Ossage orange for hedging, and the experiment is of the most satisfactory nature, so far as the growth of the plant and the barrier it offers is concerned. There has been great difficulty in obtaining good seed, which, when fully corrected, will give an impetus to the business, and the Osage fence is sure to supersede all other through this valley.

We are cultivating the Chimisol, or by some called the Escalonia, a beautiful evergreen, thrifty, and very tenacious of life in high or low lands. This shrub is indigenous to California, and when well cultivated, is unsurpassed in beauty. Also

some 2,000 of the evergreen oak of California, a few English walnut, Spanish chestnut and the New England horse-chestnut tree.

Our experience and general observation has fully convinced us that the Sacramento Valley climate and soil along the river bottoms, can hardly be matched in other portions of the State for the growth of all stone fruit, viz: the peach, apricot, nectarine and plum, and we will add the cherry; and if not matched in California, we challenge the world. The pear does well here with care, and probably as well as in any locality in the State. The fig really excels here, yielding one heavy crop on the wood of the previous year's growth, and blooming and ripening, without intermission, until the winter season, on shoots of the present season's growth. This cannot be the result where the summer season is short, or where the chilling winds prevail in the fruiting seasons. Properly trained, the fig is the most beautiful shade tree in the world.

The apple, with us, seems to have its enemies—the borer and sunblight. The pear has some hindrance by the same cause, but very much less so. The fig has no destroyer with us, and we hear of none in the valley, and for the reason that the milk or sap of the tree is offensive, if not poisonous, to insects. Even grasshoppers will avoid them, while there is a green thing left beside. The quince is somewhat a sufferer by the borer and sunblight, but less so than the apple. Of the remedy for these evils we will speak before closing. We find it universally the case that imported trees suffer from these causes vastly more than those grown in the State. The transfer through an extreme climate evaporates a vast quantity of the sap, and one or two seasons is required for its recovery, and it probably never will make so fine a tree as those grown here.

This fact all nurserymen in the State agree on, that a tree in the bud grown in California, is worth more than one imported, even if it be two years growth. Pomegrantes do well here, and some even favor them for hedging, but one Osage fence is worth a dozen of them.

For grapes of all the varieties, our climate will equal any in the world, and soon we will give ample proof of the assertion. General Sutter's grapes are not quite as large as those from Los Angeles, but are sweeter; and the cause is, that his vineyard is on very high and dry soil, and what we term the upland, which does not yield to the vine the moisture necessary to fill out the fruit. Manures are the gardener's stay, but no medium can substitute for water, heat and light.

The strawberry does very finely here, when they can be constantly supplied with water, and this they must have. This is a natural climate for the raspberry. Gooseberries and currants in our climate, require moist land or irrigation; the bay or mountain atmosphere is rather more kindred. Roses and flowers generally will excell, with liquid manure and liberal moisture, systematically applied. We believe, in this valley, we can beat the world in the growth of trees and vines, with a full supply of water in the soil, or by means of irrigation. Give us water and you make us an Eden, which we hope to obtain by Artesian wells or otherwise.

We sunk an Artesian well last winter to the depth of 300 feet, and secured it well with galvanized iron. We obtained no flow, but shall prosecute the work at some future time; had contracted so to do this summer, but the loss of our entire crop of fruit by grasshoppers, caused us to defer.

This season we have had the aid of water pumped by steam, and although our works were not completed until very late in the season, we were enabled to arrive at this conclusion, that one month's sun with water, is worth three without. With these elements combined, nature seems full of her pranks.

For two years we have been selling small lots of trees and vines to be set out in the mountains, and we have the most satisfactory reports of them. The experiments prove fruit-raising in the hills no longer a venture, but more sure than the substance, (gold,) which, in part, forms those hills. In Downieville, Grass-Valley,

Nevada, and other situations of equal altitude, it has been fully substantiated that the mountain winters are a benefit rather than an injury to the tree, while the spring frosts have proved of no injury to the blossoms or fruit. We recently visited a majority of the farms and gardens contiguous to Grass Valley and Nevada, as also those on the way up. Mr. Montgomery raised this season, some ten bushels of peaches, at his farm in Penn Valley, near Rough and Ready, and obtained for them more than enough to pay him back the original cost, labor and interest. The trees we saw at Mr. McCarty's, as also at the farm of Mr. Collier, both near Grass Valley, and those of Mr. Turner near Nevada, and at Mr. Moody's (Empire Rancho), all without exception, prove fully the success of the little mountain orchards. Vines seem to do surpassingly well.

Apples have proved themselves well at ease in the mountain atmosphere. The test by Mr. Shearer, at Park's Bar, as also by others higher in the hills, has been a very good one, for no fairer or finer ones have been grown in the State. In time we shall look to our mountain neighbors for a portion of the apples which we eat. And when the iron horse speeds his way through the mountains and over the plains, to our eastern cities, then will these elevated neighbors come into competition with us in sending to our eastern friends our delicious fruits one month ahead of their own raising. And then will they look to California for their choice wines and grapes.

REMEDIES FOR DISEASES, AND PRUNING OF FRUIT TREES.

If the apple, pear and quince trees, in this valley, can be carried on to a successful growth, until they have attained the age of three years, but little fear need then be entertained for their future progress, even in the absence of that especial care previously bestowed on them—but that which is worth doing at all is worth doing well. The best and surest remedy against the blight and borers, is an abundance of water, so as to keep the sap in a continuous flow, thereby keeping the tree in a constant growing state in summer. These are not the trees the borers are most pleased with; the fly chooses to deposit her eggs in trees rather dormant, and these are the kind of trees which become infected with the sun blight. In these trees, subject to the blight, the sap is thinner than in trees of stone fruit, and when flowing in a dormant state, the scorching sun on the bark evaporates the little sap in motion, which adheres the bark to the wood, when all circulation is checked, and as there is no medium of conveying to the root the gasses received by the leaves, which is necessary to neutralize the gasses received at the root, death to the tree ensues. Shading the trunk of the trees, the side which receives the most sun, by clapboards, will be found beneficial, but a better remedy is to hoe back the soil from the tree, some two or three inches deep, and wind the trunk of the tree with cloth, loosely, for eighteen inches in hight, or cover the tree to the hight named, or even to the limbs, with tar. Then put ashes around the trunk for three or four inches in depth. Do this about the middle of March or first of April, and keep the trees well watered, unless the soil is really very moist, and the remedy will be found quite sure. Before doing this, the tree should be thoroughly examined, near the ground, to learn if the borer has been wintering in the bark or heart of the tree, where they are more oftener found than under the bark. If their trace is noticeable, follow them up, cutting carefully with a knife, until he is dragged out and destroyed; cover the wound with grafting wax, or with a tenacious clay, and fresh stable manure of equal parts. Before these remedies are applied, it will be well to wash the trunk of the tree with a solution of potash, say one pound of potash to two gallons of water. And, in fact, every tree in an orchard should have this wash applied with

a brush, about four times a year. This wash is very beneficial in loosening and enlivening the bark. In foggy, or long damp warm spells, in the latter part of winter, trees are apt to bleed, and sometimes badly, and no remedy is so good and rapid as the potash wash applied to the trunk of the tree, as also on any portion of the limbs which bleed. It is unusual, when the peach, as also other trees, come into blossom, at a time when there is a very dry warm spell, for the blossom louse to make its appearance, and unless checked will destroy much of the fruit in embryo, as well as to check the tree in its growth. This is indicated by the curling of the blossom, as well as the leaves of the tree. The insect is of a maroon, or dark brown color, and about the size of the head of a small pin. The remedy is soap suds of medium strength, applied with a syringe, or dashed on with a small clothes broom. This is used with impunity to the blossom, while it destroys the insects. Cold rains have nearly as good effect. Stone fruit set in bottom lands, do not need water of necessity, unless it is desired to force a very rapid growth, and excepting trees set very late in the season, in sandy soil, then the stimulus is rather necessary, until they appear to have a healthy start, and if continued through the season for the first year, the tree of course becomes larger. When trees, by cattle or insects, lose their leaves, watering aids to resuscitate them. The trees of all stone fruit, and others of a very rapid growth generally, should be headed in, every winter, one-sixth or one-eighth. Trees in this climate, grown to limb within one or two feet of the ground, will prove the best bearers. In setting trees, set them no deeper than when grown in nursery, except when set in sandy soil, then two or three inches deeper will be well. Mulching trees and vines with old straw or chips in the spring, is of the greatest service imaginable. The cultivation of vegetables (but not grain) among the trees, is very beneficial.

We have devoted more paper to this subject than we intended, but with the view of fully meeting your expectations.

We remain, dear sir, very truly, etc.,

BEACH & SHEPARD.

INDEX.

1. REQUIRED AND ACTUAL APPROPRIATIONS 5
2. IMMIGRANT WAGON ROAD AND EASTERN BOUNDARY SURVEY 6
 1. Explorations and Eastern Boundary Survey, 6. 2. Survey of Road, 19. 3. Protest, 24. 4. Other Roads Recommended, 25.
3. STATE LANDS 26
 1. School Lands, 26. 2. School Land Warrant Locations for 1855, 31. 3. Swamp and Overflowed Lands, 31.
4. COUNTY BOUNDARIES 33
 1. Surveys under Special Acts, 34. 2. Surveys under General Act, 35. 3. Indefinite, Disputed and Objectionable Boundaries, 36. 4. Defects of, and Proposed Amendments to, Acts Defining, 39.
5. COUNTY ROADS 42
6. MAP OF THE STATE 45
 1. Goddard's Topographical Map, 46.
7. STATISTICS 47
 1. Reports from County Surveyors, 47. 2. Reports from County Assessors, 48. 3. Reports from Others, 49. 4. Statistical Table, 50. 5. Recapitulation, 51. 6. Statistical Notes, 52.
8. APPROPRIATIONS RECOMMENDED 58
9. CONCLUSION 58
10. APPENDIX 61

CONTENTS OF APPENDIX.

APPENDIX A.

1. Expenditures and Deficiencies in Surveyor's Office 63
2. Hon. Sherman Day's Report on the Immigrant Wagon Road Explorations 77
3. " " Wagon Road Survey 84
4. Geo. H. Goddard's Report of a Survey of a Portion of the Eastern Boundary of California, and of a Reconnaissance of the Old Carson and Johnson Immigrant Roads over the Sierra Nevada 89
 Report of the Expedition, 91. Geographical Positions—Latitudes and Longitudes, 123. Distances and Altitudes on the Old Carson and Johnson Roads, with Notes thereon, 125. Computation of Hights on the above Roads, arranged in the order of their Altitudes, 131. Approximate Distances and Hights on the Sonora and Walker's River Immigrant Roads, from Observations made in 1853, 132. Meteorological Observations made during the Journey, 133. Barometrical Register for the Months of August and September, 1855, kept at Sacramento by Dr. Logan, 139. Barometrical Register for the Month of August, kept at Coloma by Dr. W. Zelmar, 140. Triangulation Tables, 141. List of Fowers gathered on Survey of Carson Road, 145. Astronomical Observations, with Notes thereon, 149.

5. O. B. Power's Report on the Calaveras Route.. 187
6. D. B. Scott's Report on the Henness' or Downieville Route..... 191
7. Communication from O. P. Chapman Esq., on the Downieville and Beckwith Route..... 193

APPENDIX B.

1. Circular to County Surveyors..... 194

APPENDIX C.

1. Substance of Appointment and Instruction under which County Boundary Surveys have usually been made..... 197
2. Report on Survey of Sierra County Boundary..... 198

APPENDIX D.

1. Circular to, and Reports from, County Surveyors 203

APPENDIX E.

1. Circular to, and Reports from County Assessors..... 259

APPENDIX F.

1. Report of Wm. Patton, of Calaveras County..... 322

APPENDIX G.

1. New England Nursery..... 327

[Document No. 6.]

IN SENATE. SESSION OF 1856.

ANNUAL REPORT

OF THE

QUARTER-MASTER

AND

ADJUTANT-GENERAL.

REPORT.

OFFICE OF QUARTER MASTER AND ADJ'T GENERAL,
Sacramento, December 15th, 1855.

To his Excellency, JOHN BIGLER, Governor of the State of California,
and Commander-in-Chief of the Militia thereof:

SIR:

In compliance with the requirements of the act concerning the organization of the militia, I have the honor to report.

"INTRODUCTORY REMARKS."

I am gratified at being able to inform you that the condition of the volunteer militia of this State has been greatly improved during the past year, and that we now have the flattering prospect that a few years more, with judicious legislative co-operation, will find California possessed of and protected by a military organization unsurpassed by that of any State of the confederacy. We have the material for the finest army in the world; give us the encouragements and we will soon establish it.

The military department of California, now numbering some three thousand of our most enterprising citizens, does not cease to feel that it is clothed with a most important trust, one that really underlies, supports and protects the institutions of the country and the liberty of the citizen. They are, therefore, united in an effort to make their separate organizations effective, both for influence and service. Few there are who are aware of the influence exerted by or the extent to which a well regulated militia protects the citizen in the enjoyment of property and the security of life and personal rights.

The long period of uninterrupted peace enjoyed by us, and our freedom from serious domestic disturbances, has induced us as a people to regard our military institutions with too much indifference; when we consider, however, that the policy of the Federal Government will not permit the increase of the regular army, beyond a force simply sufficient to carry into effect the necessary police regulations upon our Indian frontiers, relying almost absolutely and entirely upon the militia

of the country for the great emergencies of the nation, such as repelling invasions and suppressing insurrections, we cannot fail to be impressed with the idea of importance attached to the militia by the the national Government. In this view, we securely look to the militia as our chief reliance for national defense. Congress, therefore, with a view of rendering the system efficient for the purposes intended, has directed that a uniform militia organization should be established and kept up throughout the several States of the Union, and also provided for arming the same by an annual issue of arms to the States.

The wisdom which dictated the policy of enacting these laws, contemplated not only the wants of the nation, but of each individual State, and is found to apply with more force to California than to any other State in the Union, owing to her isolated position, the extent of her Indian, seaboard, and foreign frontier, and the mixed character of her population California has a seaboard frontier of seven hundred miles, almost entirely unprotected by fortifications, an Indian and a foreign frontier of more than double that extent, at the same time she is located on the very outpost of the republic, walled in by seas, mountains, and deserts on every side, and separated from her sister States by thousands of miles—with a large and troublesome Indian population, who are becoming more and more formidable from the acquisition of fire-arms, a knowledge of their use, and from concentration—with a mixed white population, representing every nation, tongue, and form of government in the known world. many of whom neither understand our language, the character of our institutions, or the intention or effect of the operation of our laws. Such seems to be the condition of California, and none who realize our true condition will have the boldness to assert that California does not require a well-regulated and effective militia establishment at her command at all times. Numberless are the elements of discord, trouble and difficulty in her composition, which require the influence and power wielded only by the strong arm of the law supported by a well-organized militia, to keep in subjection. As an evidence of this fact, we have but to recur to the events of the past year. How often has the authority of our civil officers been put at defiance and trampled under foot during the past few months! The mere existence of a well-organized and effective militia establishment would keep in awe and deter citizens from violent demonstrations, while at the same time, if required, would be fully competent to sustain the majesty of the law under all circumstances. Besides, our Indian borders are infested with tribes of hostile savages, whose barbarous depredations upon our citizens have been so frequent during the past year, as to induce the belief that there are but two alternatives before us, viz: either to wage a war of extermination, or abandon a large and productive territory, from which thousands of our enterprising citizens have obtained a plentiful subsistence for several years past. From the most reliable statistics, it is clearly shown that more than one hundred of the citizens of California have been ruthlessly murdered by Indians during the past year, consisting of men, women, and children, besides a large amount of property which has been pillaged.

Our citizens and the State authorities have continued to look to the troops of the regular army for that protection which humanity and duty alike demand of them; but while the efforts of the veteran General now in command of the Pacific division, as well as of his gallant troops, give evidence of great zeal and devotion to duty and our needs, they also furnish proofs of the most abundant character of the insufficiency of his force to accomplish the ends desired. We have, then, but one resource left us, and that is our State troops. It becomes us, then, in view of the above facts, to keep alive a spirit of military enthusiasm, and to secure a more thorough, effective and extensive military organization throughout California.

The policy of not only encouraging the establishment of a strong military force, but of making provisions for their sustenance whenever it is necessary to call them

into service, is fully warranted by the above facts. If service shall be required by our State troops in protecting our frontier from the savage horde which infest it, it is the *duty* of the Federal Government to reimburse the State for all necessary expenses incurred for that purpose Our volunteer troops are at all times ready to do duty, wherever their services are required; they have hitherto nobly responded to calls for aid and protection from our border settlements, and have, in some instances, without awaiting orders from the State authorities, penetrated into the wild retreats and fastnesses of the hostile Indians, punished them for recent depredations, and brought them to terms of a temporary peace. This has been done at a sacrifice of time and means, which they are unable to bear, and should be provided for by the State. The valuable services of our citizen soldiers on the Indian frontier, and wherever they exist, the influence exerted by them in the sustenance of order, and their inestimable importance as a nucleus around which the two hundred thousand men of California capable of bearing arms, can with confidence rally in the hour of danger, all attest the wisdom of sustaining this institution with a liberal and unsparing policy. Congress requires the organization, and California *cannot do without it.* The militia law passed at the last session of the Legislature, has had very beneficial results, not only in inducing an increased number of company organizations and swelling the number of old companies, but in the very obvious improvement in the drill, discipline and efficiency of our military corps generally. It has given an earnest that the efforts and sacrifices heretofore made by those of our citizens who have volunteered to supply the executive authorities of the State with that indispensable and important auxiliary, an effective militia force, have at length began to be understood and appreciated. Our law-givers and good citizens have arrived at last, it would seem, at the conclusion that the militia system affords the means of protecting property and personal rights, and should be vigorously sustained.

Although the law of last session has resulted beneficially, yet that it is deficient in some important particulars, there is little doubt. *The commutation tax*, levied under it upon those of our citizens who, in lieu of performing military duty, prefer sustaining a share of the burthen of keeping up an effective military force by the annual payment of a small tax, should be increased to at least double the amount required under the present law, and the law rigidly enforced in accordance with its true spirit. The duties of civil officers under the law should be more clearly defined, and severe fines and penalties imposed for neglect of official duty. For if our militia system is to be recognized as one of the institutions of the State, (and that it must be so recognised is indisputable and indispensable,) those who volunteer to become soldiers under it, have a right to expect a full, prompt, and faithful discharge of all the duties imposed upon civil as well as military officers. Whilst the officers, whose duty it is made to assess and collect the military tax have in portions of the State performed their duties faithfully; I regret to add that in other localities there has been a neglect of duty which, it is proper to infer, has arisen more from indifference to the subject, than to ignorance of the provisions of the law. For, for the purpose of rendering the law effective during the present year, I transmitted to the Assessors of the various counties of the State, on the 12th of May last, a copy of the law, and also a circular, in which their attention was particularly directed to the sections prescribing their duties. Also, on the third day of July, papers of the same character to the sheriffs of the several counties of the State; so that the above officers were advised of their duties under the new law in due time, it is believed, to have faithfully complied with its provisions. I most earnestly recommend, therefore, the incorporation of amendments to the law, which will insure the collection of this tax from every man entitled to pay it, and for this purpose would respectfully suggest, that in cases where the collector neglects or fails to do his duty, that the Board of Su-

pervisors of the county where such deficiency exists, be required to assess the amount of the deficiency upon the taxable property of the said county. Such a provision, it is believed, would make it for the interest of tax payers to see that the requirements of the law are carried into effect by the collector, and at the same time insure to the military fund what it is justly entitled to.

As I have said before, the militia system affords the means of the protection of property and personal rights, and should be sustained. The present law requires Brigade State parades to be held in each brigade on at least two days in each year, which are to be ordered by the commander in chief. This provision is one of great importance, and should be rigidly conformed to. In the absence of encampments, these parades would afford a powerful incentive among our citizen troops to emulation and improvement. The objection urged to the ordering of these parades was, that our system was new, and that the public mind was disposed to ridicule all military demonstrations in California. That this is the fact to some extent, I am not prepared to deny. If our system is imperfect, this is the best way to correct it. I believe that every honest, intelligent, and law-abiding citizen, who opposes or discourages our military system, does so because he disapproves either the objects sought to be attained, or the mode adopted to secure them. Regarding war as an inevitable evil, the Constitution of the United States declares that a military organization *shall be established* and that its objects are to execute the laws of the Union, suppress insurrections, and repel invasions. Is any one prepared to assert that no possibility, no danger exists of the violations of those laws? or that should they occur, the civil power is competent to meet the emergency? But our military system has other objects in view equally important and quite as palpable—that of sustaining the majesty of our domestic laws. Often has the civil power of California been compelled to summon the aid of this its only auxiliary, and often again will it require the strong arm of its support. If, then, there are defects in our system, let those who honestly urge them, assist its friends to remove them. But let us have our parades which are established by law, our encampments and re-unions, and much benefit will result. The comparisons of companies excites to emulation, and must result in improvement to the militia and benefit to the State and Nation. The Constitution of the United States, also, declares that Congress shall have power to provide for the organizing, arming, and disciplining the militia, reserving to the States respectively the appointment of officers, and the authority of training the militia according to the discipline provided by Congress. That authority could not be exercised without books, and instruction as to what that discipline is; and applications having been frequently made to this department for such works as would afford the correct means of instruction, and as many features of the tactics published by Congress for the use of the army, had become obsolete, I have, during the past year, compiled a work for company use, combining all of the modern improvements in drill now in use in the regular army. I have also in preparation a volume containing battalion movements and evolutions of the line, to be compiled from the same sources. The volume already issued is endorsed by the most distinguished military gentlemen of California, both of the United States Army and of our State troops. A copy of the work has been placed in the hands of the captains of each of our military companies, and is now in general use, having been accepted as the tactics of the State. It is recommended that the requisite number of copies be issued to each and every volunteer corps in the State, to be kept as other property issued is kept. Uniformity in drill is of the utmost importance to the efficiency of a body of troops acting together, and should be established.

Encampments afford the best opportunity for military discussion and investigation—for the introduction of professional military science, attainments, and im-

provements—for familiarizing the various matters connected with the detail of camp life, and rendering our citizen soldiers qualified for continued service in the field. Annual encampments should, therefore, be established by law, and our uniformed companies be required to attend them, the expenses thereof being borne by the State. An outlay of four or five thousand dollars, will purchase of the United States Government sufficient camp equipage for present necessities, and will serve the State for years. In urging this measure of establishing military encampments, I am but reflecting the united wishes of three thousand volunteer soldiers now connected with our citizen soldiery. If the changes in the militia law relative to the commutation tax herein suggested meet with favorable action by the Legislature, there will doubtless be a fund sufficient to pay all incidental expenses of an annual or semi-annual encampment.

The following is a Schedule of Arms and Accoutrements received and issued since my last annual report:

RECEIVED FROM THE U. S. ARSENAL, UNDER THE COMMAND OF CHAS. P. STONE, BENICIA.

98 Muskets, altered from flint to percussion.
98 Cartridge Boxes, Belts, and Plates, infantry.
98 Bayonets and Scabbards.
98 Waist Belts and Plates.
98 sets Musket appendages.
196 Gun Slings.
196 Cap Pouches and Picks.
98 Cavalry Sabres.
98 Sabre Belts and Plates.
98 Sabre Knots.
98 Percussion Rifles.
98 Rifle appendages.
98 Rifle Cartridge Boxes and Plates.
98 Waist Belts and Plates.

FROM CAPT. J. ROWEL, FIRST LIGHT DRAGOONS.

40 Cavalry Musketoons.
38 Cavalry Musketoon Slings and Swivels.
40 Cavalry Musketoon Cartridge Boxes.
27 Cavalry Musketoon Cap Pouches.
38 Cavalry Musketoon Wipers.
4 Cavalry Musketoon Ball Screws.
20 Cavalry Musketoon Screwdrivers.

FROM SANTA BARBARA GUARDS.

60 Percussion Muskets.
60 sets Percussion Musket appendages.
60 Infantry Cartridge Boxes and Plates.
60 Infantry Cartridge-box Belts and Plates.
60 Cap Pouches.
60 Bayonet Scabbards.

TO KLAMATH RIFLES.

40 Percussion Rifles.
40 sets Percussion Rifle appendages.
40 Cartridge Boxes.
40 Cartridge Box Plates.
40 Cartridge Boxes, Belts, and Plates.
40 Gun Slings.
1000 Rifle Ball Cartridges.
3000 Percussion Caps.
40 Cap Pouches.

TO FIRST LIGHT DRAGOONS.

40 Dragoon Pistols.
16 Dragoon Holsters.
10 Dragoon Sabres.
10 Sabre Belts and Plates.
10 Sabre Knots.

TO CITY GUARD OF LOS ANGELES.

60 Percussion Muskets.
60 Cartridge Boxes and Plates.
60 Cartridge Belts and Plates.
60 sets Musket appendages.
60 Bayonet Scabbards.

TO SACRAMENTO GUARDS.

60 Percussion Muskets.
60 Percussion appendages.
60 Cartridge Boxes and Plates.
60 Cartridge Box Belts and Plates.
60 Cross Belts and Plates.
60 Bayonet Scabbards.
200 Ball Cartridges.
250 Percussion Caps.

TO YUBA GUARDS.

50 Percussion Muskets.
50 sets Percussion Musket Appendages.
50 Infantry Cartridge-Boxes and Plates.
50 Infantry Cartridge-Belts and Plates.
50 Gun Slings.
50 Cap-Pouches.
50 Bayonet Scabbards.

TO PLACERVILLE GUARDS.

60 Percussion Muskets.
60 sets Percussion Musket Appendages.
60 Infantry Cartridge-Boxes and Plates.
60 Gun Slings.
60 Cap-Pouches.
1000 Percussion Caps.
1000 M. B. Cartridges.
60 Bayonet Scabbards.

TO GOODYEAR'S BAR RIFLES.

60 Percussion Rifles.
60 Gun Slings.
60 Cartridge-Boxes and Plates.
60 Cartridge-Box Belts and Plates.
60 Waist Belts.
60 Waist Belts and Plates.
60 Cap-Pouches.
60 sets Rifle Appendages.
1000 Ball Cartridges.
300 Percussion Caps.

TO SARSFIELD GUARDS.

48 Percussion Muskets.
48 Percussion Musket Appendages.
48 Bayonet Scabbards.
48 Belts and Plates.

TO NATIONAL GUARD.

50 Percussion Muskets.

TO MARION RIFLES.

40 Gun Slings.

TO WALLACE GUARDS.

40 Percussion Rifles.
40 Cartridge Boxes and Plates.
40 Cartridge-Box Belts and Plates.
50 Gun Slings.
40 Cap Pouches.
40 Rifle Appendages.

TO FORREST RIFLES.

40 Percussion Rifles.
40 Cartridge Boxes and Plates.
40 Cartridge-Box Belts and Plates.
40 Cap-Pouches.
40 sets Rifle Appendages.

20 Percussion Rifles.
1000 Percussion Caps.

There has been expended for the care, repair, preservation and transportation of arms, and for rent of an Armory, since my last annual report, the sum of twelve hundred and seventy-nine dollars and fifty cents.

I beg leave to state in this connection, that in my last annual report I had the honor to call your Excellency's attention to the increasing necessity for a suitable building, to be used as a State Arsenal. California has received from the General Government, during the past three years, as her quota, arms and accoutrements to the value of about fifty thousand dollars, and as the safe-keeping of the military property of the State devolves upon this Department, I have rented a building suitable for an Armory, and also for an office, at a monthly rent of one hundred and twenty-five dollars.

The Secretary of War and the Chief of Ordinance have agreed to recommend, and our Members in Congress to support and if possible to secure the passage of an Act by Congress appropriating from twenty to fifty thousand stand of arms to California for our immediate use. This is a matter of vast importance to our State, and I would most respectfully urge the adoption of a memorial by our State Legislature, at the earliest practicable moment, recommending the measure to Congress.

There have been seventeen new Company Organizations during the past year, numbering an aggregate of about twelve hundred men, composed generally of our most enterprising citizens. This large addition to our Volunteer Militia force, is to be attributed mainly to the great necessities of the State, and the encouragements extended by the provisions of the law of last session. The business and expenses of the Department have necessarily been greatly augmented.

An appendix, containing a Register of the Militia of the State, is herewith transmitted.

Hoping that merited attention may be given to the cause of our State Militia by the Legislature at the ensuing session,

I have the honor to subscribe myself,
Your obedient servant,

WM. C. KIBBE,
Quarter-Master and Adjutant-General.

APPENDIX

TO

QUARTER-MASTER GENERAL'S

REPORT.

REGISTER OF THE MILITIA

OF THE

STATE OF CALIFORNIA.

J. NEELY JOHNSON, Commander-in-Chief.

WILLIAM C. KIBBE, Quartermaster and Adjutant General.

WILLIAM C. KIBBE, Inspector General.

FIRST DIVISION.

J. M. COVARRUBIAS, Major General.

FIRST BRIGADE, FIRST DIVISION.

JEFFERSON HUNT, Brigadier General.

Organized Volunteer Companies in First Brigade First Division.

Los Angeles Rangers, (Cavalry.)

Organized August 1, 1853.

A. W. Hope, Captain.
Elias Brevoort, First Lieutenant.
John G. Phillips, Second Lieutenant.
W. F. B. Sanford, Brevet Second Lieutenant.
J. B. Winston, Orderly Sergeant.

The Los Angeles Rangers were organized with a view of protecting the lives and property of our citizens in that portion of the State, from the depredations of Indians and the many Sonorian and other assassins which have infected that country for several years past. This corps has done much active service and rendered material aid to the citizens and civil authorities of Los Angeles. They number fifty men.

City Guard of Los Angeles, (Infantry.)

Organized February 3, 1855.

Wm. W. Twist, Captain.
John O. Wheeler, First Lieutenant.
Chas. E. Hale, Second Lieutenant.
David M. Porter, Brevet Second Lieutenant.
Geo. Loyd, Orderly Sergeant.

They are uniformed, and enjoy the reputation of a well drilled and efficient military company. They number seventy men.

Ringgold Light Artillery, Los Angeles.

Organized June 21, 1855.

J. K. Labatt, Captain.
P. C. Williams, First Lieutenant.
D. W. Rinehart, Second Lieutenant.
O. Morgan, Third Lieutenant.

Number 60 men. Not equipped.

SECOND BRIGADE, FIRST DIVISION.

JOHN O'NEILL, Brigadier General, Monterey.

Organized Volunteer Companies in Second Brigade First Division.

SANTA BARBARA MOUNTED RIFLEMEN.

Organized January 6, 1854.

Henry Carnes, Captain.
C. R. V. Lee, First Lieutenant.
Valentine W. Hearne, Second Lieutenant.
Chas. Pierce, Brevet Second Lieutenant.
E. B. Williams, Orderly Sergeant.

This company is uniformed, and is composed of seventy men.

SECOND DIVISION.

HORACE W. CARPENTIER, Major General.

FIRST BRIGADE, SECOND DIVISION.

CHARLES E. ALLEN, Brigadier General.

SECOND BRIGADE, SECOND DIVISION.

WILLIAM R GORHAM, Brigadier General.

Organized Companies in Second Brigade Second Division.

First California Guard, (Light Artillery.)

Organized July 27, 1849.

Thomas D. Johns, Captain.
James F. Curtis, First Lieutenant.
Charles S. Eigenbrodt, Second Lieutenant
R. B. Hampton, Brevet Second Lietenant.
John S. Ellis, Orderly Sergeant.

Numbering 70 men.

This was the first corps of State troops organized in California, and was originally composed of upwards of one hundred members, all of whom were enterprising citizens of San Francisco. To those who established the first organization, the State is under obligations. I can pass no more deserved compliment upon this Company than to say, that they organized in view of the necessities of the times, have ever held themselves in readiness to do duty in sustaining the majesty of the laws, have given to the militia of the State the services and experience of many well drilled soldiers schooled in their ranks, and are now a most efficient military corps, ably commanded, and well officered,

Marion Rifles.

Organized in June, 1852.

Wm. Neely Johnson, Captain.
Edwin A. Riggs, First Lieutenant.
John C. Griswold, Second Lieutenant.
James W. Stillman, Brevet Second Lieutenant.
E. B. Zabriskie, Orderly Sergeant.

This Company was organized by Captain F. B. Shaeffer, one of the most accomplished military gentlemen in California, under whose command the "Marions" attained a high reputation as an accomplished and effective corps, which they continue to enjoy under the command of Captain Johnson. The "Marions" are well officered and drilled, well uniformed, and at all times ready to do good service for the State.

San Francisco Blues, (Infantry.)

Robert Farren, Captain.
J. Martin Reese, First Lieutenant.
Henry McNally, Second Lieutenant.
Peter A. Owens, Brevet Second Lieutenant.
——— ———, Orderly Sergeant.

This is one of the most efficient military corps in California. Under the com-

mand of Captain Gorham, the "Blues" have gained a high military reputation, and can be relied upon as one of the most effective military organizations in the country.

City Guard, (Organized as Light Artillery, Drill as Infantry.)

John A. Clark, Captain.
George F. Watson, First Lieutenant.
Robert S. Lammot, Second Lieutenant.
William C. Allen, Brevet Second Lieutenant.
Orderly Sergeant, A. Loring.

This corps is well uniformed and equipped, and under a high state of discipline. I had the pleasure of witnessing the parade and target practice of this Company in the month of September last, and was pleased to observe a proficiency in the drill of the corps which elicited the universal approbation of all present, and gave evidence that Capt. Clark's command are not inferior to any Company in California. The "City Guard" is an efficient and reliable military corps, ably commanded and well officered.

First Light Dragoons, (Cavalry.)

J. Rowell, Captain.
J. Sewall Reed, First Lieutenant,
A. McKendry, Second Lieutenant.
L R. Mills, Brevet Second Lieutenant.
C. L. Taylor, Orderly Sergeant.

This corps is reported to be well drilled, is well mounted and uniformed, and is at all times ready for service—numbering, in rank and file, sixty men. Captain Rowell is entitled to great credit for keeping up so large a company of mounted men, all of whom are eager to distinguish themselves whenever the State may need their services.

National Lancers, (Cavalry.)

Thomas Hayes, Captain.
Michael Fennell, First Lieutenant.
Michael Hayes, Second Lieutenant.
J C. Beideman, Brevet Second Lieutenant.
J. M. Peterson, Orderly Sergeant

The National Lancers were the first mounted corps organized in California, and have, and still enjoy, the reputation of being a thoroughly drilled and effective corps. They have hitherto received the highest encomiums from officers of experience and ability of the U. S. Army. They were organized, and originally commanded, by Major J. R. West, an accomplished military officer, and are now commanded by Capt. Hayes, and instructed by Sergeant J. M. Peterson, gentleman of great experience and thorough drill officers.

Wallace Guards, (Light Infantry, Riflemen.)

Chas. E. S. McDonald, Captain.
Robt. Munro, First Lieutenant.
Henry Steele, Second Lieutenant.
Samuel Aiken, Brevet Second Lieutenant.
Richard Charlock, Orderly Sergeant.

This is a newly organized corps, established mainly through the energy of Capt. McDonald, and gives good promise for the future. The Wallace Guards have uniformed with the Highland dress, and are armed with the rifle.

National Guards, (Light Infantry.)

R. Pollock, Captain.
D. McDowell, First Lieutenant.
J. V. McElwee, Second Lieutenant.
J. J. Hoff, Brevet Second Lieutenant.
J. Hanna, Orderly Sergeant.

This is a newly organized company, and promises to be a valuable acquisition to our volunteer force. Uniformed according to the army regulations; armed with the musket, and numbering seventy men.

Sarsfield Guards, (Infantry.)

Richard F. Ryan, Captain.
Daniel O'Regan, First Lieutenant.
Charles B. Grant, Second Lieutenant.
James C. Cusick, Brevet Second Lieutenant.
P. R. Hannah, Orderly Sergeant.

This is a newly organized corps, and is reported to be rapidly qualifying for service. They are uniformed and number sixty men.

Washington Continental Guards, (Infantry.)

F. C. M. Fenn, Captain.
A. H. Clarke, First Lieutenant.
J. H. Nicholson, Second Lieutenant.
M. Compton, Brevet Second Lieutenant.
B. Bryan, Orderly Sergeant.

This is a new organization.

THIRD DIVISION.

Composed of the Counties of San Joaquin, Mariposa, Tulare, Tuolumne, and Calaveras.

SAMUEL BOOKER, Major General.

FIRST BRIGADE, THIRD DIVISION.

Composed of the Counties of San Joaquin, Tulare, and Mariposa.

THOMAS C. FLOURNOY, Brigadier General.

Organized Companies.

CITY GUARD OF STOCKTON, (INFANTRY.)

C. C. Butler, Captain.
J. W. Whitney, First Lieutenant.
F. C. Andrew, Second Lieutenant.
Wilson Barstow, Brevet Second Lieutenant.
Samuel A. Drake, Orderly Sergeant.

The organization is not complete.

SECOND BRIGADE, THIRD DIVISION.

Composed of the Counties of Tuolumne and Calaveras.

THOMAS N. CAZNEAU, Brigadier General.

Organized Companies in Second Brigade Third Division.

SONORA GRAYS.

James M. Stuart, Captain.
David S. McDowell, First Lieutenant.
Alexander F. Platt, Second Lieutenant.
George Higbee, Brevet Second Lieutenant.
J. M. McNeill, Orderly Sergeant.

This Company is located in Sonora, Tuolumne county, where it has, on many occasions, rendered aid to the civil authorities of that county. The Grays have the reputation of being a well-drilled and efficient corps. They are fully uniformed and equipped.

COLUMBIA FUSILEERS, (INFANTRY.)

T. N. Cazneau, Captain.
W. H. Van Arsdale, First Lieutenant.
James McLane, Second Lieutenant.
H. K. White, Brevet Second Lieutenant.
Wm. H. Carlton, Orderly Sergeant.

This Company is located at Columbia, armed with muskets, with an artillery detachment, is under a high state of discipline, and has already rendered service to the civil authorities. The Fusileers may at all times be considered as ready for the emergencies of the County or State.

JESUS MARIA GUARDS, (INFANTRY.)

A. C. Lewis, Captain.
N. Holmes, First Lieutenant.
R. A. Wiggins, Second Lieutenant.
A. A. Harper, Orderly Sergeant.

This corps was organized for the purpose of protecting the citizens of Calaveras from violent acts of a large foreign population and to render the civil officers aid in collecting the County and State revenue. Has done service.

FOURTH DIVISION.

Composed of the Counties of Amador, El Dorado, Sacramento, Placer, Nevada, and Sierra.

JAMES WALSH, Major General.

FIRST BRIGADE, FOURTH DIVISION.

Composed of Amador, El Dorado, and Sacramento.

A. M. WINN, Brigadier General.

Organized Companies First Brigade Fourth Division.

SUTTER RIFLES, (RIFLEMEN.)

M. D. Corse, Captain.
E. E. Eyre, First Lieutenant.
D. N. Hunt, Second Lieutenant.
Chas. J. Torbert, Brevet Second Lieutenant.
John C. Keenan, Orderly Sergeant.

This is one of the best drilled Companies in the country, and entirely reliable for service. I had the pleasure of attending the annual target practice of this corps, and can cheerfully give testimony, that the "Sutters" evinced the combined elements of correct drill, good discipline, successful marksman, and in every respect, efficient soldiers. Lieutenant Eyre, under whose command the Company has been for some time past, is entitled to great credit, for the energy and ability displayed in perfecting the drill and discipline of the Company.

PLACERVILLE GUARDS, (INFANTRY.)

Alexander Hunter, Captain.
William Jones, First Lieutenant.
Isaac S. Titus. Second Lieutenant.
A. L. Dorsey, Brevet Second Lieutenant

This Company has been recently re-organized, and I am informed is progressing rapidly in military science, and is ably commanded and well officered.

SACRAMENTO GUARD, (INFANTRY.)

L. L. Baker, Captain.
R. W. Wilcox, First Lieutenant.
John Arnold, Second Lieutenant.
Joseph Howell, Brevet Second Lieutenant.
D. A. De Merit, Orderly Sergeant.

This is a newly organized Company, and is composed of upwards of sixty members, finely uniformed and equipped. The Company has in Captain Baker an excellent drill officer, and I am gratified to observe that the Guards are making rapid progress in the military art, and will soon hold a high position among our Volunteer Companies.

SECOND BRIGADE, FOURTH DIVISION.

Composed of Placer, Nevada, and Sierra.

B. H. MYERS, Brigadier General.

Organized Companies.

Sierra Guards, (Infantry.)

R. H. Taylor, Captain.
George H. Sandy, First Lieutenant.
Charles Cochrane, Second Lieutenant.
William P. Skelly, Brevet Second Lieutenant.

This Company is located at Downieville, and is reported to be a well-drilled and efficient corps.

Goodyear's Bar Rifles, (Rifles.)

Justus Bragg, Captain.
James W. Smith, First Lieutenant.
John Richardson, Second Lieutenant.
Julius Menihardt, Brevet Second Lieutenant.
B. Kenneiff, Orderly Sergeant.

This Company is located at Goodyear's Bar, Sierra county, and has the reputation of being a serviceable corps. Composed of seventy men.

Mountain Blues, (Infantry.)

D. G. Lake, Captain.
P. H. Soper, First Lieutenant.
J. E. Woodward, Second Lieutenant.
W. C. Howe, Brevet Second Lieutenant.
Nathan Hagan, Orderly Sergeant.

This Company is located at Iowa City, Placer county, and will soon be ready for service. Numbering seventy-one men.

Forest Rifles, (Riflemen.)

Alonzo Platt, Captain.
William Patterson, First Lieutenant.
M. R. Evans, Second Lieutenant.
John J. Musser, Brevet Second Lieutenant.
Frank Ryan, Orderly Sergeant.

This Company is located at Forest City, Sierra county, will soon be uniformed and equipped, and fit for service. Composed of seventy-five men.

FIFTH DIVISION.

Composed of the counties of Yuba, Sutter, Yolo, Solano, Napa, Sonoma, Marin and Mendocino.

JOHN A. SUTTER, Major General.

FIRST BRIGADE, FIFTH DIVISION.

Composed of the counties of Yuba, Sutter, and Yolo.

P. C. RUST. Brigadier General,

Organized Companies.

Yuba Guards, (Infantry.)

M. D. Dobbins, Captain.
W. C. Burnett, First Lieutenant.
James K. Cowan, Second Lieutenant.
Mortimer Fuller, Brevet Second Lieutenant.
Charles Raish, Orderly Sergeant.

This is reported to be an exceedingly well drilled corps, and well uniformed and equipped, and at all times ready for service. Composed of 90 men.

MOUNTAIN RIFLEMEN.

W. P. Calloway, Captain.
L. B. Bruin, First Lieutenant.
John Noble, Second Lieutenant.
George R. Payne, Brevet Second Lieutenant.

Composed of seventy men, and located at New York Flat, Yuba county.

SECOND BRIGADE, FIFTH DIVISION.

Composed of the Counties of Solano, Napa, Sonoma, Marin, and Mendocino.

WILLIAM HARTMAN, Brigadier General.

SIXTH DIVISION.

Composed of the counties of Butte, Plumas, Colusi, Shasta, Siskiyou, Trinity, Humboldt, and Klamath.

PATRICK HARRIS, Major General.

FIRST BRIGADE, SIXTH DIVISION.

Composed of the counties of Butte, Plumas, Colusi, and Shasta.

S. H. DOSH, Brigadier General.

SECOND BRIGADE, SIXTH DIVISION.

Composed of the counties of Siskiyou, Trinity, Humboldt, and Klamath.

D. D. COLTON, Brigadier General.

TRINITY GUARDS, (INFANTRY.)

E. A. Rowe, Captain.
F. S. McKenzie, First Lieutenant.
W. S. Lowden, Second Lieutenant.
V. A. Maillot, Brevet Second Lieutenant.
Richard Clifford, Orderly Sergeant.

This Company is uniformed and equipped, and is reported to be a well organized, efficient, and reliable military corps; is located at Weaverville, Trinity county.

KLAMATH RANGERS, (RIFLEMEN.)

William J. Terry, Captain.

Located at Crescent City, Klamath county, and has done service in Indian fighting.

KLAMATH COUNTY COAST RANGERS, (RIFLEMEN.)

Located at Crescent City—has also done service in fighting Indians.

These two Companies have done good service for the State. I am not advised of their condition at this time.

KLAMATH RIFLES, (RIFLEMEN.)

Located at Weitchpeck, Klamath county.

William M. Young, Captain.
John T. Carey, First Lieutenant.
Samuel P. July, Second Lieutenant.
James M. Sims, Brevet Second Lieutenant.

Numbering seventy-five men.

This corps has done valuable and important service for the State, in punishing Indians for depredations committed upon the citizens of that county. They were in active service for several weeks, during which time they gave evidence of great skill as Indian fighters, having killed a large number and compelled the main body to sue for peace. For this service, and the expenses of sustaining the expedition, they have not been remunerated by the State.

Mounted Coast Riflemen.

C. A Hillman, Captain.
C. H. Colier, First Lieutenant.
O. D. Olney, Second Lieutenant.
T. R. Sloan, Brevet Second Lieutenant.

Numbering ninety-nine men.

Salmon Guards, (Riflemen.)

John S. Hughes, Captain.
William Hudson, First Lieutenant.
Isaac Griggs, Second Lieutenant.
Joseph Church, Brevet Second Lieutenant.
A. Wiley, Orderly Sergeant.

Located at Sawyer's Bar, Salmon River, Klamath county, and numbers sixty men. New organization.

Siskiyou Guards.

William Martin, Captain.
James B. Holloway, First Lieutenant.
H. H. Warman, Second Lieutenant.
John Leara, Brevet Second Lieutenant
Z. T. Gibbs, Orderly Sergeant.

Located at Humbug City, Siskiyou county, and numbers seventy five men New organization.

Document No. 10.

IN ASSEMBLY.] [SESSION OF 1856.

ANNUAL REPORTS

OF THE

OFFICERS OF THE INSANE ASYLUM

OF THE

STATE OF CALIFORNIA,

FOR THE YEAR 1855.

JAMES ALLEN, STATE PRINTER.

OFFICERS OF THE ASYLUM.

BOARD OF TRUSTEES:

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Resident Physician and Superintendent.

W. D. COWAN, M. D.,
Assistant Physician.

A. C. BAINE,
Secretary and Treasurer.

REPORT

OF THE

BOARD OF TRUSTEES

OF THE

ASYLUM FOR THE INSANE.

REPORT.

INSANE ASYLUM OF CALIFORNIA,
January 1, 1856.

To the Honorable Legislature of California:

The Board of Trustees respectfully submit to the Legislature their Annual Report. The able and special report of the Resident Physician is herewith submitted, which fully explains the condition of the Institution under our care. The Treasurer's Report is also herewith submitted, giving a detailed account of the receipts and expenditures of the Institution. This report we deem it not necessary to publish, unless the Legislature should be pleased to order to the contrary.

We would respectfully, but earnestly, suggest to the Legislature the propriety of making an immediate appropriation for the support of the Asylum to the thirtieth day of June next, equal to $34,000, and then another appropriation for a year from that time, so that the fiscal year will begin on the first day of July instead of as now. This will prevent the necessity of asking the Legislature at each session for an early appropriation, and besides will enable the Institution to procure supplies on better terms.

The appropriation for last year will not pay any of the bills later than the last of November, consequently the accounts for the month of December, amounting to $3,587 76, are unprovided for; and must remain, with all subsequent supplies, unpaid until there be a Legislative appropriation.

It will be perceived that there is a balance on hand of special funds amounting to $675 94; this we have ordered to be transferred to the subsistence fund.

We respectfully, and earnestly, request the Legislature to make an appropriation in warrants, for the annual support of the Asylum, that will certainly yield $50,000 for its support.

We call the special attention of your bodies to that portion of the Resident Physician's Report concerning an additional wing to the Asylum, and the altering the present wing, so as conform to the plan adopted by the Board in the construction of the main building; and we ask an appropriation of $40,000 for that purpose.

We would, in conclusion, invite a legislative committee to examine, personally, into the necessity of this appropriation, as well as everything connected with the management of the Asylum.

NELSON TAYLOR,
SAMUEL A. BOOKER,
C. GRATTAN,
S. C. BAINE,
P. E. CONNOR.

ANNUAL REPORT

OF THE

RESIDENT PHYSICIAN

OF THE

ASYLUM FOR THE INSANE,

OF THE

STATE OF CALIFORNIA.

REPORT.

According to law, it again becomes the duty of the Resident Physician to submit to the Board of Trustees his Annual Report on the present condition of the State Asylum for the Insane, and to exhibit a concise account of the management and progress of the Institution during the past year.

For the information of the Legislature, the Government and the people, a brief statistical history of the insanity of the State, since its organization, has been accurately and carefully prepared.

These statistics have been tabulated and condensed, not only for preservation and reference, but for the value attached to them by medical men, the interest they afford to legislators and as the only source from which useful and practical deductions can be obtained.

The preparation of these tables and explanations required a great amount of labor, patience and experience; and as they are a collection of facts carefully observed, about which there is neither doubt nor uncertainty, they are reliable as a basis for future legislation.

TABLE I.

Will show the number of patients in the Asylum January 1, 1855; the number admitted during the year; the whole number under treatment; the number who recovered and were discharged; the number of deaths, and the number remaining in the Institution at the close of the year:

	Males.	Females.	Total.
Patients in the Asylum, Jan. 1, 1855	120	14	134
Number admitted to Jan. 1, 1856	184	30	214
Whole Number under Treatment during the Year	304	44	348
Number who Recovered and were Discharged	146	20	168
Number who Died	16	2	18
Number in Asylum, Dec. 31, 1855	140	22	162

At the date of the last Report, Dec. 31, 1854, there were 134 patients in the Institution, of whom 120 were males and 14 were females; since that time 214 new cases have been admitted; of these, 184 were males and 30 were females, so that the whole number under treatment during the year was 348; of this num-

ber, 168 have been discharged cured, 18 have died, and 162 are yet inmates of the Asylum; of these, 140 are males and 22 are females.

During the year 1850, the insane accumulated chiefly in the City of San Francisco, and were under treatment in the Marine Hospital, or were confined temporarily on board the "Brig," and numbered within the year about 22.

In 1851, the State Hospital at Sacramento received and provided for 34; and the insane department of the General Hospital in Stockton, admitted 13, this year the number had increased to 47.

In 1852, by an Act of the Legislature, all insane persons throughout the State were directed to be sent to the State Hospital, in Stockton, for treatment. In this year 124 were admitted, of whom 50 recovered, 10 died, and 62 remained at the close of the year.

In 1853, by distinct legislative enactment, the General Hospital System was abolished, the County Hospital System substituted, and the Insane Asylum created.

All patients in the Ward of the General Hospital were then discharged or sent to the Marine Hospital in San Francisco, and all the insane patients and property left in charge of the officers of this Institution.

In this year 160 new cases were admitted, and 222 under treatment, of whom 108 recovered and were discharged, 12 died, and 103 remained at the close of the year.

In 1854, the number of admissions had increased to 202, the number under treatment 305, of these 150 recovered, 21 died, and 134 were in the Asylum at the close of the year.

In 1855, the number admitted was 214, the whole number provided for and under treatment was 348, of whom 168 were cured and discharged, 18 died, and 162 are now inmates of the Institution.

Thus, during the period of five years, 713 insane persons have been admitted into the Institution, and 1,012 have been under treatment within the same time; of these 546 have been discharged, 484 have recovered, 62 have died, and 162 are yet inmates of the Asylum.

Of those admitted, 640 were males and 73 females; of those who recovered, 436 were males and 45 females; of those who died, 56 were males and 6 females; of those who remained at the the date of this report, 140 are males and 22 are females.

In proportion to the population, the number of insane persons in the State is very large, and the number now in the Asylum shows how rapidly the disease has increased—among a people whose distinct existence bears only the age of six years.

It is reasonable to suppose that it will progress more slowly hereafter. Many causes have been greatly modified; some have nearly ceased. The people have become more settled and permanent, more moral, more temperate, more contented, happy and free from excitement.

The productive causes of the disease are diminishing, and in a few generations it might be entirely controlled, if parents were compelled to perform their duty to their children; to educate them physically, to cultivate and expand the moral sentiments, to restrain their precocious propensities, and to make the education of the intellectual faculties of secondary importance to the development of the physical organization.

TABLE II.

General Statistics of the Hospital for the Insane, from 1850 *to* 1856.

Showing the progress of Insanity in the State since the period of its organization; the number and sex of all the patients admitted; the number who recovered and were discharged; the number of deaths, and the number remaining in the Institution at the close of each year:

	1851.	1852.	1853.	1854.	1855.	Total.
Whole number of patients admitted	13	124	160	202	214	713
" under treatment	13	124	222	305	348	1,012
" discharged	7	62	120	171	186	546
" recoveries	6	50	108	150	168	484
" deaths	1	10	12	21	18	62
" males admitted	13	113	151	179	184	640
" females "		11	9	23	30	73
" males discharged	7	58	115	152	164	496
" females "		4	5	19	22	50
" males recovered	6	47	105	132	146	436
" females "		3	4	18	20	45
" males who died	1	9	10	20	16	56
" females "		1	2	1	2	6
Whole number remaining in the Hospital at close of each year	6	62	103	134	162	467

TABLE III.

Indicates the method of classification, and shows the different forms of Insanity that existed in 1,012 cases, under treatment during a series of five years:

	1851.	1852.	1853.	1854.	1855.	Total.
Mania acute	5	35	73	104	115	332
" chronic	1	10	13	52	62	138
" periodic	2	8	14	25	45	94
" epileptic	1	5	10	14	22	52
" puerperal		2	3	12	11	28
" nympho		2	2	4	10	18
Dementia acute	1	18	25	10	15	69
" chronic	1	14	24	24	20	83
" senile				2	4	6
Melancholia	1	12	23	28	14	78
Monomania	1	4	22	30	40	97
Suicidal	4	6	8	25	38	81
Homicidal	2	4	4	12	20	42

TABLE IV.

Indicates the causes alleged to have produced or developed insanity in 1,012 cases under treatment, during five years :

MORAL CAUSES.

	1851.	1852.	1853.	1854.	1855.	Total.
Mental excitement	2	2	6	27	30	67
Domestic affliction		8	9	21	18	56
Disappointment, pecuniary	1	10	22	28	25	86
Disappointment, political				2	1	3
Desertion of wife		4	2	5	4	15
Desertion of husband		1	1	3	4	9
Desertion of mistress		1	1	2	2	6
Love and jealousy		2	2	4	5	13
Grief and fright		3	6	5	7	21
Religious excitement		3	5	4	10	22
Disappointed affections		4	1	5	2	12
Loss of property	1	4	7	4	16	32
Intense application		2	2	3	4	11
Seduction and desertion		2	2	1	1	6
Spiritualism			4	5	7	16
Mormonism				1	1	2

PHYSICAL CAUSES.

Intemperance in spirits	5	10	37	42	65	159
Intemperance in opium				2	4	6
Intemperance in tobacco				1	2	3
Dissipation and exposure		6	16	10	12	44
Consequence of parturition		2	3	10	11	26
Suppressed menstruation		1	2	2	5	10
Congestive fever		2	1	2	2	7
Typhoid fever	1	2	4	6	7	20
Injury of head	1	1	2	6	4	14
Coup de soliel		2	1	1		4
Masturbation	1	8	16	28	32	85
Amativeness		1	2	2	4	9
Ill health		10	15	23	25	73
Epilepsy	1	5	10	10	20	46
Syphilis		1	2	4		7
Effect of poison		1	1	1		3
Meningitis			1	1		2
Hereditary		2	4	10	15	31
Unknown		26	30	20	23	99

In the preceding tabular arrangement, intemperance is noted as the alleged and immediate cause of insanity in 159 cases.

The object in calling attention to this particular cause alone is, that the Legislature may be immediately induced to establish a hospital for inebriates, a house of correction for drunkards, or at once enact that persons habitually intemperate shall be subjected to all the legal disabilities of the insane.

In compliance with certain conditions, we are authorized to admit and retain in confinement, if necessary, individuals charged with insanity.

Now, persons afflicted with *mania a potu*, are, without doubt, temporarily insane, but so soon as the cause is removed the effects cease. The patient recovers and demands his discharge, not to maintain a correct and orderly deportment in the community, not to elevate his social position, not to control his morbid appetite and diseased propensities, but to resume his depraved and debasing habits as before.

They are again certified as "lunatics," dangerous to be at large; again admitted and again discharged.

A house of correction, where such incorrigibles could be confined for a long period, under strict discipline and furnished with constant and useful employment, would be a more suitable receptacle than a hospital for the insane.

The experience of other States and communities, has conclusively proven that liquor laws, fines, or legislative enactments, cannot make men either temperate, moral or religious. Some other remedy, then, must be provided.

An institution of this character, carefully established, and under proper management, would prove of incalculable value to the morals, the habits, and the industry of the people; it would be productive of wealth, prosperity and happiness to thousands of families in the land, and a source of revenue and profit to the State. It would produce more beneficial effects, result in more immediate good, and permanent benefit to the people and the State, than all the Maine liquor laws and statutes on temperance, that were ever enacted.

If these persons are still to be admitted into this hospital, it is earnestly desired that the officers should be invested with the requisite legal authority to detain them so long as in their judgment it may be necessary to effect a complete and permanent reformation. Or, as before suggested, let the Legislature enact, that every person habitually intemperate, shall be subjected to all the legal disabilities of the insane; then every individual will be protected, and secure in his personal rights, and a responsibility removed from the officers of the Institution, which ought not in justice to be imposed upon them.

TABLE V.

Will show the different ages of all the patients at the time of admission into the Hospital, during a series of five years.

	1851.	1852.		1853.		1854.		1855.		Total.	
	Males.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
Between 10 and 20 years..	1	7	2	18	3	21	2	24	4	71	11
" 20 and 30 " ..	5	39	7	114	11	142	12	152	16	452	46
" 30 and 40 " ..	4	43	1	74	2	68	10	72	15	261	28
" 40 and 50 " ..	2	15	1	33	3	26	6	34	5	105	15
" 50 and 60 " ..	1	8		19	1	9	2	16	3	53	6
" 60 and 70 " ..		1		4		4	1	4	1	13	2
" 70 and 80 " ..				1		2		2		5	

The average age of all the patients admitted was 31 years, the extremes were 8 and 72 years. The largest number, indeed, more than one-half of those admitted, were between the ages of 20 and 30 years, and about one-third between 30 and 40 years.

TABLE VI.

Will exhibit the civil conditions of all the patients admitted and under treatment during a period of five years—those married, those not married, and the widowed.

	1851.	1852.	1853.	1854.	1855.	Total.
Number single	10	75	160	217	240	702
" married	2	32	40	56	68	198
" widowed	1	17	22	32	40	112
Males married	2	27	30	38	42	139
" single	10	72	155	213	235	285
" widowed	1	14	17	21	37	90
Females married		5	10	18	26	59
" single		3	5	4	5	17
" widowed		3	5	11	13	32

Nearly three-fourths of all those admitted were single persons, about one-tenth were widowed, and one-fifth married.

Celibacy undoubtedly favors the development of insanity.

TABLE VII.

Shows the different ocupations pursued by 713 patients, previous to their admission into the Asylum.

	1851.	1852.	1853.	1854.	1855.	Total.
Lawyers		1	2	1	5	9
Physicians					2	2
Preachers		1	1	2	2	6
Teachers		1	1	1	2	5
Editors			1	3	1	5
Printers	1	1	1	1	1	5
Artists		1	1	1		3
Druggists		1	1	1		4
Machinists			3	2	3	8
Architects			1	2	1	4
Engravers		2	1	1	2	6
Engineers			1	1	3	5
Merchants		5	5	8	12	30
Traders	1	3	3	12	10	29
Peddlers		1	2	5	4	12
Clerks		3	4	11	8	26
Tailors		2	1	4	6	13
Saddlers		1	1	2	2	6
Tanners			1	2	2	5
Tinners			1		1	2
Painters		1	4	2	4	11
Bakers		6	4	2	2	14

	1851.	1852.	1853.	1854.	1855.	Total.
Butchers	1	1	1	1	2	6
Gardeners		2	1	4	1	8
Farmers	1	7	10	10	14	42
Laborers		6	15	7	7	35
Soldiers	2	6	2	8	10	28
Sailors		2	10	14	14	40
Masons		2	3	2	2	9
Cooks		4	2	6	6	18
Rancheros				3	4	7
Vaqueros		2	1	3	2	8
Arriero		2	1	2	3	8
Blacksmiths	1	4	2	10	4	21
Silversmiths		1	1	2	1	5
Carpenters	1	6	11	12	2	32
Distillers		1	2	1	1	5
Gamblers		2	1	3	3	9
Servants			3	2	2	7
Sail Makers		1	1		1	3
Shoe Makers			1	2	2	5
Wagon Makers			1	1	1	3
Cabinet Makers		1	1	1	1	4
Miners	5	38	72	102	127	344
No occupations		12	20	45	64	141

The mining population suffered most, having furnished nearly half of the inmates ; many, however, had followed other occupations previously.

TABLE VIII.

Will show the number of insane persons admitted during each month of every year, since the organization of the Institutions.

	1851.	1852.	1853.	1854.	1855.	Total.
January		1	4	8	14	27
February		2	13	15	10	40
March		4	4	15	13	36
April		2	17	17	17	53
May		21	23	16	15	75
June		10	15	15	20	60
July		7	17	23	24	71
August	1	7	15	20	22	65
September	2	18	11	19	18	68
October	2	7	14	14	26	63
November	3	22	13	24	18	80
December	5	23	15	16	17	76
Dry Season, eight months	8	94	125	148	160	535
Rainy Season, four months	5	30	35	54	54	178

The Rainy Season comprises the months of December, January, February and March. The remaining eight months are warm and dry, without much rain or dew.

TABLE IX.

Shows the number of patients sent to the Asylum from each county in the State, and their residence at the time of admission.

	1851.	1852.	1853.	1854.	1855.	Total.
Alameda			1	1	6	8
Amador					2	2
Butte		2	3	2	2	9
Calaveras	2	10	16	20	26	74
Colusi			2	1		3
Contra Costa	1	2	4	4	4	15
El Dorado		9	23	22	23	77
Humboldt				1	1	2
Los Angeles	1			2	4	6
Mariposa	1	2	5	5	6	19
Marin				1		1
Napa		1	2	2	1	6
Nevada		3	6	2	4	15
Monterey		2	2	2	1	7
Placer		3	4	5	7	19
Plumas				1	3	4
Sacramento		26	44	50	56	176
San Francisco		34	99	97	95	325
San Joaquin	6	14	27	30	24	101
Santa Barbara				1	2	3
Santa Cruz				1	2	3
Santa Clara		2	4	10	13	29
San Diego					1	1
Sonoma			2	3	10	15
Solano		2	6	5	4	17
Stanislaus					2	2
Sutter				2	2	4
Sierra					2	2
Shasta			2	4	3	9
Siskiyou		1	2	3	2	8
Trinity				1	1	2
Tuolumne	2	5	16	12	18	53
Yolo		2	2	1	1	6
Yuba		2	10	14	16	42

The patients were sent from the different counties generally in proportion to the population. San Francisco furnishes the largest number—then Sacramento and San Joaquin. The populous mining counties of El Dorado, Calaveras, Yuba and Tuolumne, sent also a large number.

TABLE X.

Will show the nativity of each patient, and the whole number of Americans and Foreigners admitted during each year.

AMERICANS.

	1851.	1852.	1853.	1854.	1855.	Total.
Maine		4	5	6	10	25
New Hampshire		1	2	2	3	8
Vermont			2	5	4	11
Massachusetts	1	2	12	24	20	59
Rhode Island		1	4	4	2	11
Connecticut	1	3	5	3	3	15
New York	4	12	32	34	36	118
New Jersey		1	2	5	4	12
Pennsylvania		3	10	8	12	33
Delaware		1	1	2	1	5
Maryland		2	6	4	5	17
Virginia		5	10	4	10	29
North Carolina		2	7	3	4	16
South Carolina		1	1	2	1	5
Georgia		4	5	2	4	15
Alabama				1	2	3
Mississippi		1	2	3	4	10
Missouri		1	2	10	11	24
Louisiana		2	5	4	5	16
Arkansas		1	1	2	2	6
Texas		1	1	3	2	7
Kentucky	1	2	3	6	10	22
Tennessee		2	6	7	11	26
Ohio		3	8	14	12	37
Indiana		4	8	5	6	23
Illinois		2	4	8	5	19
Michigan			1	3	2	6
Wisconsin				2	2	4
Iowa			1	2	1	4
California	1	4	4	4	5	18
Oregon			1	1	2	4
Utah				1	1	2
Washington					1	1

FOREIGNERS.

England		10	14	16	18	58
Ireland	2	10	28	24	22	86
Scotland		7	11	7	6	31
France	2	12	29	22	24	89
Spain		1	1	2	2	6
Portugal			3	2	1	6
Italy		1	3	5	2	11
Germany	1	5	18	16	26	66

DIET.

The Hospital is furnished with the best meat, bread and vegetables to be obtained in the market.

The ordinary diet is plain, wholesome, nutritious, well cooked and decently served, each one being permitted as much as he desires, or as is consistent with health and propriety.

Every article is of the first quality, and prescribed daily according to the condition and necessity of the individual. Simple but substantial food is generally best for the insane. No greater error can be committed than placing them on a low and insufficient diet, or administering active purgatives or abstracting large quantities of blood. The insane have rarely too much blood, but it is unequally distributed. The brain is irritable, but not inflamed. This condition demands quieting remedies and nourishment, not bleeding and starvation. Narcotics will quiet and control him, depletions aggravate and destroy him.

CLOTHING, ETC.

Nearly all the clothing for the men, every article of wearing apparel for the women, all the mattresses, sheets, pillows, cases and spreads, used in the Institution, have been manufactured by the inmates, affording employment and amusement to a large number of patients, and saving a considerable item of expense.

OFFICERS.

The officers of the Asylum consist of a Board of Trustees, composed of five members with their Secretary and Treasurer; the Resident Physician, the Assistant Physician, the Steward and the Matron.

By Statute, the Resident Physician is made the chief executive officer of the Institution, having a general superintendence of all the property, grounds and buildings, and the exclusive control of every individual employed about the premises. With the approval of the Board of Trustees, all persons engaged in the Institution are appointed by him, their compensation fixed, their duties assigned, and retained or discharged at his sole discretion.

It is his duty to visit all the patients daily, and to prescribe their treatment and diet, to examine every applicant for admission, and their discharge depends entirely on his judgment and pleasure.

He is charged to enforce economy in every department of labor and expense, to maintain discipline, order, good conduct and obedience to the rules and regulations of the Institution, to see that all the accounts are correctly kept and reported to the Trustees, and by them submitted to the Legislature.

In the absence of the Resident Physician, all the duties and responsibilities of his office devolve upon the Assistant Physician.

The Steward, under the direction of the Superintendent, makes all purchases of provisions, furniture and clothing, and is held responsible for their economical use and preservation.

It is also his duty to attend to the cleanliness, ventilation, warmth and good order of every department of the Hospital, and to see that the business of the garden, bakery and kitchen is properly and punctually performed.

The Matron has exclusive charge and control of all the female patients and their attendants, and of the entire domestic arrangements of the Institution, managing and directing them always according to the general and special direction of the Superintendent.

ATTENDANTS.

Attendants for the insane require peculiar qualifications ; they should possess health, activity and courage, united with patience, kindness and benevolence.

Their duties are laborious, responsible and unceasing, heavy drafts are constantly made on their tempers and dispositions, requiring a large share of forbearance and self-control. They are required to treat the patients with kindness and respect, to avoid violence and harshness, to answer all questions civilly, and to grant every reasonable request.

They are not permitted to practice deception, to make promises which cannot be performed, or to use the language of ridicule and derision.

They are prohibited from using force or violent measures without the sanction of the physicians, and the giving of blows is never tolerated except in self-defense.

With kindness and constant watchfulness, with tact and good management, restraints are seldom necessary and frequently injurious.

Each attendant is held accountable for the conduct and condition of every patient in his ward, each of whom must be bathed, shaved and provided with clean clothes at least once a week, and to those cases requiring it, a bath and clean clothes every day.

Every bed is furnished with clean sheets and pillow-cases weekly, and every part and portion of the ward kept scrupulously neat, clean and well ventilated.

IMPROVEMENTS.

Within the past year a large and convenient building has been erected adjoining the main structure, containing an excellent kitchen and bakery, a large dining room, bath rooms and wash rooms for the males, a dining room, bathing and washing rooms for the females, rooms for servants, etc.

The baths and washing rooms are supplied with hot and cold water from large tanks placed on the roof. The capacity of the dining room for the males is for 150 persons, and that for the female wards for 40 persons. The whole structure is well built and substantial, plainly finished, convenient and well adapted to the condition and wants of the establishment. The block of land on which the main buildings are situated, has been laid out and planted with a great variety of indigenous and exotic trees and shrubs ; the remaining 100 acres have been inclosed, but as yet unimproved. The office, apothecary and reception rooms have been furnished neatly and elegantly, and all the wards, halls and rooms supplied with comfortable and substantial furniture. In fact, the Institution is now in an elegant condition, and will compare favorably with those of a similar character in the Atlantic States. That portion devoted to the use of the males is amply sufficient for the wants of the establishment, but an additional wing is absolutely necessary to accommodate the increasing number in the female wards.

It is earnestly desired, that the small amount necessary to erect and furnish this addition will be immediately appropriated by the Legislature.

The buildings will then be complete, and fully adequate to the wants of the State for the next ten years. (See the accompanying report of the Board of Trustees, for a correct estimate of the amount necessary for the erection and completion of this additional wing.)

EXPENDITURES, ETC.

For a correct and satisfactory exhibit of the financial condition of the Institution, see the accompanying report of the Treasurer, of the receipts and expenses incurred during the year.

The annual reports and accounts from many Institutions of a similar character in the Atlantic and Western States have been received and examined, and very few of them found to be supported and sustained on the same amount as is annually appropriated for the maintenance of this Institution.

All outstanding accounts are collected at the end of each month, and submitted to the Trustees, who examine them, and if found correct, are audited and ordered paid by the Treasurer.

The monthly expenditures average about $3,500.

ACKNOWLEDGEMENTS.

The Editors and Publishers of the following journals, will please accept the thanks of the officers and inmates of the Institution for copies of their respective papers, many of which were sent gratuitously :

Times & Transcript, San Francisco.
Alta California, "
Herald, "
Chronicle, "
Journal, "
Pacific, "
Christian Advocate, "
Republican, Stockton.
Argus, "
State Journal, Sacramento.
California Farmer, Sacramento.
Monterey Herald, Monterey.
Jackson Sentinel, Amador.
Solano Herald, Benicia.
Observer, Erie, Pa.
Courier, Charleston, S. C.
Telescope, Abbeville, S. C.
Pioneer Magazine, San Francisco.
Placer Herald, Auburn.

Of all the public Institutions that have existed in the State since its organization, this Hospital alone has escaped the charge of extravagance, venality and corruption. It was created as a general Hospital by the Legislature, which met at San José in May, 1851, and has been under the management and control of the most of the present officers during a period of nearly five years. It can be confidently asserted and triumphantly sustained, that no misapplication of funds, no extravagant expenditures, no squandering of money, or no dereliction of duty can be charged upon the Physicians, the Treasurer, or the Board of Trustees.

It is only claimed for those officers, that they have faithfully discharged their obligations to the State, performed their duty to the Institution, established its character, and maintained its reputation above reproach, during a period unexampled for its extravagance, corruption and dishonesty.

And it is with no ordinary feelings of pride and satisfaction, that they can point to this noblest monument of human charity, as reflecting honor and credit upon the State, and restoring reason, health and happiness to hundreds of her citizens.

ROBT. K. REID, M. D.,
Resident Physician.

Stockton, Cal., December 31st, 1855.

METEOROLOGICAL OBSERVATIONS

MADE AT THE

STATE INSANE ASYLUM,

IN THE

CITY OF STOCKTON, CALIFORNIA,

DURING THE YEAR 1855.

LATITUDE 37° 57′ N. LONGITUDE 121° 14′ 26″ W. ELEVATION 20 FEET.
THERMOMETER, Farenheit. BAROMETER, Aneroid.

METEOROLOGICAL OBSERVATIONS.

January, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8 AM	2 PM	8 PM	8 AM.	2 PM.	8 PM.	
	○	○	○				
1	50	54	46	29.10	29.15	29.30	W. S. W., rain last night, 2 inches, cloudy.
2	42	54	50	29.55	29.60	29.60	S. W., frost, P. M. clouds, W. S. W.
3	46	52	50	29.60	29.55	29.35	S. W., rain 3-10 in. P. M. rain 1-10 S. W.
4	46	52	42	29.27	29.30	29.35	" rain 3-10, clouds, P. M. clear.
5	44	48	36	29.50	29.55	29.60	" frost, P. M. rain, drizzling.
6	36	50	42	29.80	29.80	29.80	" frost, fog, P. M. clouds in north.
7	38	46	44	29.80	29.80	29.80	" cloudy, rain 3-100 in.
8	42	51	48	29.80	29.70	29.75	" " 3-100 in.
9	47	50	48	29.80	29.80	29.80	" " 2-100 in.
10	50	50	50	29.80	29.80	29.80	" foggy and cloudy.
11	48	50	48	29.75	29.62	29.60	" cloudy, rain 2-100 in.
12	45	50	48	29.60	29.60	29.60	" clouds, fog, P. M. clear.
13	46	50	42	29.80	29.80	29.75	" " "
14	44	46	42	29.80	29.75	29.75	" " P. M. rain 2-100.
15	44	46	42	29.75	29.70	29.70	" " light rain.
16	44	46	44	29.70	29.65	29.65	" " "
17	44	48	46	29.70	29.70	29.65	" clouds, P. M. S. S. W., clear.
18	46	50	50	29.67	29.65	29.65	" clouds, fog, 2 P. M. clear.
19	46	56	48	29.70	29.67	29.70	" " " "
20	40	58	44	29.75	29.75	29.75	N. W., clear, dense fog.
21	36	58	42	29.80	29.75	29.75	" frost, clear.
22	48	58	48	29.77	29.70	29.70	" "
23	48	60	52	29.70	29.70	29.65	" "
24	40	60	52	29.65	29.65	29.60	" "
25	46	66	50	29.57	29.50	29.50	" "
26	46	66	52	29.60	29.55	29.50	" "
27	44	68	50	29.50	29.50	29.45	" " P. M. smoky, W. S. W.
28	44	68	52	29.50	29.45	29.40	" " clear, W. S. W.
29	46	68	54	29.32	29.27	29.25	W. S. W., cloudy in P. M.
30	50	58	50	29.40	29.45	29.50	" rain 8-100.
31	52	58	48	29.55	29.50	29.45	" clear.

		8 AM.	2 PM.	8 PM.		8 AM.	2 PM.	8 PM.
MEAN TEMP.—	Thermometer—	44°	54°	47°.	Barometer—	29.63	29.61	29.60.
MAXIMUM.—	"	52°	68°	54°.	"	29.80	29.80	29.80.
MINIMUM.—	"	36°	44°	42°.	"	29.10	29.15	29.25.

Rain, 2 9-10 inches. Cloudy days, 14; clear days, 17.

METEOROLOGICAL OBSERVATIONS—Continued.

February, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A.M.	2 P.M.	8 P.M.	
1	52	60	52	29.40	29.40	29.50	W. S. W., rain 3-100, cloudy.
2	46	66	54	29.55	29.55	29.60	" fog, P. M. west.
3	46	66	54	29.70	29.70	29.75	" clear.
4	50	66	56	29.80	29.70	29.70	" "
5	50	66	56	29.65	29.55	29.55	" "
6	50	68	56	29.40	29.45	29.50	" "
7	58	68	58	29.52	29.55	29.60	" cloudy.
8	56	60	58	29.72	29.72	29.70	S. W., rain 3-10, P. M. cloudy.
9	52	62	58	29.77	29.75	29.70	" foggy, P. M. clear.
10	52	60	54	29.67	29.57	29.55	" cloudy, P. M. rain 3-10.
11	50	60	50	29.75	29.70	29.70	N. W., clear and fine.
12	48	60	52	29.75	29.75	29.70	" " "
13	50	62	54	29.70	29.70	29.65	" " "
14	52	62	58	29.70	29.65	29.70	" " "
15	52	62	54	29.75	29.75	29.70	" " "
16	50	68	56	29.70	29.75	29.60	" " "
17	48	66	56	29.80	29.75	29.80	" " " P. M. west.
18	52	70	54	29.80	29.65	29.55	" " " " S. W.
19	48	60	48	29.40	29.35	29.30	W. N. W., fine breeze all day.
20	42	58	48	29.22	29.25	29.25	" moderate.
21	42	58	48	29.35	29.37	29.40	" frost, clear.
22	48	54	46	29.45	29.40	29.42	S. W., drops rain, P. M. rain 5-100.
23	48	56	48	29.45	29.40	29.42	" rain 2-100, P. M 4-100.
24	40	54	50	29.50	29.52	29.55	N. W., foggy, P. M. clear.
25	48	58	56	29.65	29.55	29.55	S. W., clear, P. M. clouds.
26	52	60	58	29.52	29.52	29.55	S. E., 2-10, P. M. 1-10 rain.
27	54	60	58	29.52	29.50	29.50	S. S.W., rain 7-10, 2 P. M. 5-10, 8 P. M. 5-10
28	54	60	58	29.52	29.50	29.50	W. S. W., clear.

		8AM.	2PM.	8PM.		8AM.	2PM.	8PM.
Mean Temp.—	Thermometer—	49°	62°	54°.	Barometer—	29.60	29.57	29.53.
Maximum.—	"	58°	70°	58°.	"	29.80	29.75	29.75.
Minimum.—	"	40°	54°	46°.	"	29.22	29.25	29.25.

Rain, 2 74-100 inches. Cloudy days, 7 ; clear days, 21.

METEOROLOGICAL OBSERVATIONS—Continued.

March, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A M.	2 P M.	8 P M.	
1	58	66	62	29.70	29.70	29.70	W. S. W., clear.
2	56	64	60	29.65	29.65	29.57	" mor. hazy ; then clear.
3	60	68	56	29.60	29.65	29.65	" mor. cloudy ; "
4	56	66	60	29.67	29.57	29.60	N. N. W., mor. hazy ; clear P. M.
5	58	60	58	29.50	29.52	29.45	S. W., rain, 2 P. M. rain 1-10 in.
6	62	66	60	29.42	29.52	29.45	" cloudy, 8 P. M. rain 3-100 in.
7	60	66	62	29.50	29.52	29.60	" cloudy, rain 4-100. P. M. 6-10 in.
8	60	68	60	29.55	29.55	29.50	" cloudy, P. M., N. W., clear.
9	58	64	54	29.55	29.55	29.50	W., cloudy, P. M., N. N. W., clear.
10	52	62	54	29.48	29.48	29.48	N. W., hazy, N. N. W., clear.
11	52	60	50	29.50	29.45	29.45	" " "
12	54	56	52	29.40	29.36	29.27	S. S. W., cloudy, rain 8-100, S. 3-10 high
13	56	58	54	29.25	29.30	29.40	S., rain 6-100. 2 P. M., west. [wind.
14	52	56	52	29.42	20.30	29.35	S. W., cloudy, rain drops, 8 P. M., 2-10 in.
15	48	54	48	29.50	29.55	29.62	N. N. W., clear and pleasant.
16	44	56	50	29.70	29.65	29.65	N. W., clear ; P. M. west.
17	50	60	54	29.70	29.65	29.63	" " "
18	54	64	58	29.67	29.67	29.67	" " "
19	56	66	60	29.67	29.67	29.62	" " "
20	54	66	62	29.67	29.65	29.62	" " "
21	54	68	64	29.62	29.60	29.57	" " east.
22	56	70	66	29.60	29.60	29.60	" " west, hot.
23	56	72	66	29.62	29.60	29.60	" " " "
24	60	72	68	29.65	29.62	29.57	N. W., calm, hazy.
25	60	72	68	29.57	29.55	29.50	" " W. clear.
26	60	72	66	29.47	29.45	29.40	" " W. "
27	58	68	60	29.40	29.37	29.40	W. N. W., calm, N. N. W., clear.
28	56	68	62	29.47	29.50	29.50	" " "
29	58	68	62	29.52	29.52	29.55	W., clouds, 9 P. M., drizzling rain.
30	60	68	60	29.52	29.45	29.37	S., rain 26-100, P. M. 3-100.
31	58	66	58	29.30	29.25	29.35	" 47-100, P. M. 3-100, 8 P. M. west.

		8 A M.	2 P M.	8 P M.		8 A M.	2 P M.	8 P M.
Mean Temp.—	Thermometer—	56°	65°	59°.	Barometer—	29.54	29.53	29.52.
Maximum.—	"	62°	72°	68°.	"	29.70	29.70	29.70.
Minimum.—	"	44°	54°	48°.	"	29.25	29.25	29.27.

Rain, 2 1-5 inches. Clear days, 22 ; cloudy, 9.

METEOROLOGICAL OBSERVATIONS—Continued.

April, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A.M.	2 P.M.	8 P.M.	
1	54	62	52	29.35	29.52	29.62	S., rain 11-100, P. M. 3-100, 8 P. M. clear.
2	50	60	54	29.70	29.67	29.65	W. N. W., fine breeze, P. M. N. W.
3	52	66	54	29.70	29.68	29.70	N. W., " " "
4	54	68	56	29.72	29.75	29.78	N. W., hazy all day.
5	56	70	64	29.77	29.77	29.80	West, clear.
6	60	74	66	29.77	29.77	29.70	"
7	62	78	68	29.70	29.60	29.55	"
8	64	80	70	29.50	29.42	29.40	N. W., breeze, P. M. west.
9	60	62	60	29.37	29.37	29.35	S. W., cloudy, hazy P. M. drops rain.
10	56	58	52	29.35	29.35	29.30	S.W., cloudy, 4 P. M. 35-100, 8 P. M. 36-100
11	48	56	52	29.35	29.45	29.50	W. S.W., rain all night, h'l & r'n, 83-100, 2 P.M.
12	54	62	56	29.60	29.55	29.60	West, clear, scattering clouds.
13	54	62	56	29.62	29.62	29.60	E. S. E., cloudy, 2 P. M. drops rain, 8 P. M.
14	56	62	56	29.55	29.52	29.50	S., cloudy, drops rain, 8 P. M. 7-100. [3-100
15	54	58	52	29.32	29.30	29.20	W. S. W., 46-100 and P. M. 19-100, cloudy.
16	54	60	54	29.22	29.27	29.42	N. E., rain 49-100, S. W., rain 11-100.
17	54	60	54	29.61	29.70	29.80	W. S. W., rain 20-100, 8 P. M. clear.
18	52	62	58	29.90	29.90	29.85	N. W., clear and scattering clouds.
19	56	66	60	29.80	29.72	29.70	W., calm, hazy.
20	58	70	64	29.65	29.60	29.56	W., clear, N. W., breeze.
21	60	72	66	29.55	29.50	29.50	W. N. W., P. M. west breeze.
22	58	70	60	29.50	29.52	29.50	W., clear, P. M. hazy.
23	58	68	58	29.50	29.50	29.45	W. S. W., clear, P. M. hazy.
24	58	68	58	29.50	29.55	29.50	" " "
25	58	70	60	29.65	29.60	29.60	" "
26	60	72	60	29.60	29.55	29.55	" "
27	60	70	62	29.50	29.45	29.45	" "
28	54	66	58	29.50	29.50	29.45	S. W., clouds, P. M. rain 6-100 in.
29	58	64	58	29.42	29.45	29.50	" clear.
30	58	68	58	29.67	29 67	29.70	" "

		8 A.M.	2 P.M.	8 P.M.		8 A.M.	2 P.M.	8 P.M.
Mean Temp.—	Thermometer—	58°	66°	58°.	Barometer—	29.57	29.58	29.56.
Maximum.—	"	64°	80°	70°.	"	29.90	29.90	29.85.
Minimum.—	"	48°	56°	52°.	"	29.22	29.27	29.20.

Rain, 3 29-100 inches. Clear days, 20; cloudy, 10. On the 11th, heavy hail.

METEOROLOGICAL OBSERVATIONS—CONTINUED.

May, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A.M.	2 P.M.	8 P.M.	
1	56	70	60	29.70	29.65	29.62	W., light wind, clear.
2	56	64	52	29.62	29.65	49.67	W. N. W., fine breeze, clear.
3	52	62	54	29.60	29.70	29.67	N. W. " "
4	54	66	58	29.62	29.57	29.45	West, " "
5	56	70	62	29.55	29.50	29.50	" " hazy.
6	60	70	64	29.45	29.45	29.47	" " "
7	56	72	56	29.50	29.50	29.50	" " "
8	58	70	64	29.50	29.50	29.47	" " "
9	60	74	60	29.52	29.50	29.50	" " "
10	60	70	62	29.52	29.45	29.45	" " "
11	56	62	56	29.42	29.40	29.45	W. S. W., 4 P. M. rain 35-100 in.
12	56	62	58	29.47	29.45	29.45	" clear, P. M. cloudy.
13	58	68	60	29.50	29.45	29.45	S. W., cloudy, "
14	58	60	58	29.50	29.45	29.50	W. N. W., cloudy, rain 9-100, P. M. S. E.
15	58	66	60	29.62	29.65	29.65	W. S. W., cle r. [rain 56-100.
16	62	72	66	29.60	29.50	29.50	" " hazy.
17	62	70	60	29.47	29.47	29.47	" " variable.
18	60	68	60	29.50	29.55	29.50	W., clear.
19	60	62	68	29.50	29.45	29.40	S. W., cloudy, rain 4-100 in.
20	56	60	56	29.50	29.50	29.55	" showery, rain 6-100 in.
21	54	64	58	29.57	29.55	29.50	W. N. W., clear.
22	58	68	56	29.47	29.45	29.45	N., clear, eve. N. W.
23	56	66	58	29.55	29.62	29.65	W. N. W., clear, eve. N. W.
24	58	66	56	29.67	29.67	29.65	" " "
25	58	70	62	29.70	29.65	29.60	" " "
26	62	76	66	29.60	29.55	29.50	" " hazy.
27	62	76	62	29.50	29.50	29.50	N. W., clear.
28	60	74	66	29.55	29.52	29.50	W. N. W., clear.
29	64	78	68	29.52	29.52	29.52	" hazy, P. M. clear.
30	68	84	74	29.55	29.55	29.55	" calm, clear.
31	74	90	82	29.55	29.50	29.50	" sultry, hot.

		8AM.	2PM.	8PM.		8AM.	2PM.	8PM.
MEAN TEMP.—	Thermometer—	59°	69°	61°.	Barometer—	29.55	29.53	29.53.
MAXIMUM.—	"	74°	90°	82°.	"	29.70	29.70	29.67.
MINIMUM.—	"	52°	60°	52°.	"	29.42	29.40	29.40.

Rain, 1 1-10 inches. Clear days, 25 ; cloudy days, 6.
On 14th, thunder, lightning and hail.

METEOROLOGICAL OBSERVATIONS—Continued.

June, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A.M.	2 P.M.	8 P.M.	
1	76	92	80	29.50	29.50	29.45	N. W., sultry, clear and hot.
2	74	92	76	29.45	29.45	29.42	" " "
3	70	84	72	29.42	29.30	29.25	N. N. W., fresh breeze.
4	70	84	68	29.25	29.25	29.25	West, clear.
5	64	82	70	29.32	29.30	29.30	" fine breeze.
6	68	86	75	29.32	29.32	29.32	" "
7	72	86	75	29.40	29.35	29.37	" "
8	72	90	76	29.40	29.40	29.40	" "
9	74	90	74	29.45	29.40	29.42	" "
10	72	86	72	29.42	29.40	29.40	" "
11	70	84	72	29.40	29.37	29.35	West, A. M. clear, fine breeze.
12	62	72	64	29.47	29.55	29.65	W. S. W., drops rain, cloudy.
13	62	76	68	29.67	29.60	29.55	W. N. W., clear, fine breeze.
14	64	68	66	29.50	29.45	29.42	N. W., " "
15	66	78	64	29.35	29.30	29.27	" " "
16	66	78	66	29.30	29.30	29.25	" " "
17	66	82	72	29.37	29.35	29.35	" " P. M. W. S. W., clear.
18	68	84	72	29.42	29.40	29.35	" " " " "
19	68	88	74	29.42	29.42	29.42	W. S. W., clear.
20	70	90	82	29.40	29.40	29.35	" "
21	76	95	85	29.35	29.32	29.30	West, clear.
22	80	98	82	29.30	29.27	29.30	"
23	75	90	76	29.32	29.30	29.30	"
24	66	82	74	29.35	29.32	29.27	"
25	68	85	74	29.32	29.25	29.25	"
26	68	82	66	29.32	29.32	29.35	West, light breeze, clear.
27	66	76	66	29.45	29.45	29.40	" P. M. W. S. W.
28	72	86	72	29.45	29.40	29.40	" clear and hot, breeze.
29	72	90	76	29.45	29.42	29.45	" " "
30	80	94	83	29.45	29.45	29.45	" " "

		8 A.M.	2 P.M.	8 P.M.		8 A.M.	2 P.M.	8 P.M.
Mean Temp.—	Thermometer—	69°	83°	73°.	Barometer—	29.37	29.37	29.37.
Maximum.—	"	80°	95°	85°.	"	29.67	29.60	29.65.
Minimum.—	"	62°	72°	64°.	"	29.25	29.25	29.25.

Rain on one day. 29 days perfectly clear. Wind, N. W.

METEOROLOGICAL OBSERVATIONS—Continued.

July, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8 AM ○	2 PM ○	8 PM ○	8 A.M.	2 P.M.	8 P.M.	
1	78	96	82	29.45	29.42	29.40	West, light, sultry, clear.
2	80	92	80	29.45	29.45	29.42	" " "
3	72	88	76	29.42	29.42	29.47	" " "
4	70	86	74	29.40	29.37	29.37	" " "
5	70	84	74	29.45	29.45	29.45	" " smoky, clear.
6	70	86	74	29.45	29.40	29.40	N. W., clear, fine breeze.
7	74	94	84	29.37	29.32	29.25	" " "
8	78	98	82	29.32	29.27	29.25	" " "
9	78	88	78	29.30	29.32	29.35	" " "
10	70	88	74	29.40	29.45	29.45	" " "
11	72	94	78	29.47	29.45	29.40	" " "
12	72	94	78	29.45	29.40	29.40	" " "
13	72	86	74	29.35	29.30	29.25	" " "
14	68	84	66	29.30	29.25	29.20	" " strong breeze.
15	64	78	60	29.30	29.30	29.30	" " "
16	62	78	64	29.35	29.35	29.35	" " cool and pleasant.
17	62	78	68	29.45	29.45	29.40	" " " "
18	62	78	68	29.45	29.42	29.40	" " " "
19	62	78	68	29.50	29.45	29.45	" " " "
20	64	78	68	29.50	29.50	29.47	" " " "
21	64	78	68	29.52	29.50	29.47	" " " "
22	62	78	68	29.50	29.45	29.45	N. W., mor. clouds to north.
23	62	76	68	29.52	29.52	29.50	" clear.
24	62	78	70	29.55	29.50	29.42	" "
25	66	78	72	29.45	29.47	29.40	" "
26	66	84	76	29.45	29.45	29.42	" "
27	68	88	78	29.47	29.42	29.45	" "
28	70	88	78	29.45	29.45	29.40	" "
29	68	86	78	29.45	29.42	29.40	" "
30	64	78	70	29.50	29.45	29.42	" "
31	64	78	70	29.45	29.40	29.32	" "

		8 AM.	2 PM.	8 PM.		8 AM.	2 PM.	8 PM.
Mean Temp.—	Thermometer—	70°	81°	75°.	Barometer—	29.45	29.42	29.43.
Maximum.—	"	80°	98°	84°.	"	29.52	29.50	29.50.
Minimum.—	"	62°	76°	60°.	"	29.30	29.25	29.20.

Rain—none. Every day clear. Wind, N. W.

METEOROLOGICAL OBSERVATIONS—Continued.

August, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A.M.	2 P.M.	8 P.M.	
1	64	84	76	29.37	29.35	29.32	N. N. W., with fine breeze, clear.
2	66	84	78	29.40	29.37	29.35	N. W., clear, fine breeze.
3	68	88	78	29.42	29.40	29.40	" " "
4	74	88	80	29.50	29.47	29.45	" " "
5	74	90	78	29.50	29.50	29.45	" " "
6	74	90	76	29.47	29.42	29.40	" " "
7	74	92	80	29.40	29.35	29.32	" strong breeze, clear.
8	74	98	82	29.35	29.32	29.30	" " "
9	72	92	74	29.35	29.30	29.25	" " "
10	66	80	68	29.30	29.32	29.20	" fine "
11	64	75	64	29.30	29.30	29.30	" " "
12	66	76	66	29.45	29.42	29.42	" " "
13	66	80	68	29.55	29.55	29.50	" " "
14	66	84	70	29.52	29.47	29.47	" " "
15	66	84	68	29.52	29.47	29.47	" " "
16	66	86	74	29.50	29.45	29.40	" " "
17	68	90	84	29.45	29.40	29.37	N. W., clear and fine breeze.
18	70	86	78	29.45	29.42	29.37	" clear, 11 P. M. cloudy, lightn'g, N.W.
19	70	86	78	29.45	29.42	29.45	W. N. W., moderate.
20	68	86	72	29.45	29.42	29.45	N. W., fine breeze.
21	68	88	76	29.50	29.47	29.47	" "
22	68	88	74	29.52	29.50	29.47	" "
23	72	92	76	29.50	29.45	29.40	" "
24	72	90	76	29.37	29.32	29.32	" windy, stormy.
25	68	84	70	29.40	29.37	29.40	" "
26	68	82	72	29.52	29.50	29.50	" fine breeze.
27	64	82	72	29.60	29.52	29.50	" "
28	66	82	70	29.50	29.47	29.40	" "
29	66	86	72	29.45	29.40	29.40	" "
30	68	86	70	29.50	29.47	29.45	" "
31	64	78	64	29.50	29.50	29.47	" "

		8 A.M.	2 P.M.	8 P.M.		8 A.M.	2 P.M.	8 P.M.
Mean Temp.—	Thermometer—	70°	88°	74°.	Barometer—	29.47	29.44	29.41.
Maximum.—	"	74°	98°	82°.	"	29.55	29.55	29.50.
Minimum.—	"	64°	75°	64°.	"	29.30	29.30	29.20.

No rain or clouds. 31 clear days. Wind invariably N. W.

METEOROLOGICAL OBSERVATIONS—Continued.

September, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8 A.M. ○	2 P.M. ○	8 P.M. ○	8 A.M.	2 P.M.	8 P.M.	
1	64	80	68	29.52	29.50	29.50	N. W., clear and cloudless.
2	64	80	68	29.60	29.55	29.50	" " "
3	62	82	64	29.52	29.47	29.45	" " "
4	64	80	66	29.47	29.40	29.35	" " "
5	66	80	70	29.42	29.42	29.45	" strong breeze, clear.
6	66	82	72	29.50	29.50	29.45	" " "
7	66	84	72	29.50	29.50	29.42	" " "
8	68	84	72	29.45	29.35	29.32	N. W., clear.
9	68	82	72	29.37	29.35	29.32	West, light wind, light clouds, N. W.
10	62	76	64	29.37	29.35	29.32	" " " W. S. W.
11	62	80	68	29.37	29.30	29.32	N. W., clear.
12	60	80	66	29.40	29.37	29.35	" "
13	64	78	68	29.35	29.32	29.30	" "
14	56	78	60	29.45	29.40	29.37	" "
15	60	78	64	29.45	29.42	29.40	" "
16	62	74	62	29.42	29.37	29.37	" "
17	60	74	64	29.40	29.37	29.40	" "
18	62	76	64	29.50	29.45	29.42	" "
19	58	78	64	29.50	29.45	29.42	" "
20	58	78	64	29.57	29.45	29.42	" "
21	62	78	60	29.45	29.45	29.42	" "
22	58	72	60	29.45	29.42	29.40	W. S. W., clear.
23	60	76	64	29.40	29.45	29.47	N. W., clear.
24	62	80	72	29.55	29.50	29.40	" "
25	62	82	76	29.50	29.45	29.40	" "
26	66	88	78	29.40	29.35	29.32	" "
27	66	86	70	29.35	29.30	29.27	" "
28	64	86	74	29.37	29.37	29.40	" "
29	64	88	74	29.52	29.50	29.47	" "
30	64	88	76	29.52	29.42	29.42	" "

		8 A.M.	2 P.M.	8 P.M.		8 A.M.	2 P.M.	8 P.M.
Mean Temp.—	Thermometer—	62°	80°	68°.	Barometer—	29.45	29.42	29.40.
Maximum.—	"	68°	88°	78°.	"	29.60	29.55	29.50.
Minimum.—	"	56°	72°	60°.	"	29.35	29.30	29.27.

No rain. Every day clear. Wind N. W. invariably.

METEOROLOGICAL OBSERVATIONS—Continued.

October, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8AM ○	2PM ○	8PM ○	8 A.M.	2 P.M.	8 P.M.	
1	66	88	78	29.45	29.40	29.40	N. W., clear.
2	70	90	78	29.35	29.25	29.35	" " and warm.
3	72	92	72	29.32	29.27	29.22	" " "
4	62	82	70	29.30	29.25	29.25	" "
5	64	76	64	29.45	29.45	29.50	" "
6	62	74	64	29.62	29.60	29.60	" " cool and heavy dew.
7	60	78	68	29.67	29.60	29.55	" "
8	62	72	66	29.57	29.52	29.50	
9	64	74	66	29.55	29.52	29.50	" "
10	62	82	72	29.60	29.57	29.57	
11	64	86	72	29.62	29.55	29.52	" "
12	64	84	74	29.50	29.40	29.35	" "
13	64	84	72	29.35	29.32	29.32	" "
14	66	82	76	29.45	29.42	29.47	" "
15	62	80	70	29.55	29.52	29.57	" "
16	62	82	72	29.57	29.50	29.50	" "
17	62	82	72	29.47	29.40	29.40	" " eve. hazy-
18	62	78	64	29.42	29.37	29.40	" " " " clouds, S. W.
19	62	80	66	29.50	29.47	29.50	
20	64	80	68	29.42	29.55	29.55	
21	64	80	68	29.60	29.52	29.52	
22	64	80	68	29.60	29.50	29.50	
23	64	84	72	29.60	29.55	29.55	
24	60	80	66	29.65	29.55	29.60	N. W., clear, eclipse moon, 9¼ P. M.
25	60	80	68	29.62	29.55	29.52	N. W., clear and no clouds.
26	62	80	68	29.56	29.50	29.50	" " "
27	64	78	60	29.57	29.52	29.50	" " "
28	58	72	57	29.57	29.52	29.50	N. W., heavy dew and foggy mor.
29	52	68	56	29.50	29.47	29.45	" " "
30	52	68	58	29.52	29.52	29.52	" " "
31	52	70	58	29.57	29.60	29.60	" " "

		8 A.M.	2 P.M.	8 P.M.		8 A.M.	2 P.M.	8 P.M.
Mean Temp.—	Thermometer—	64°	82°	70°.	Barometer—	29.55	29.55	29.47.
Maximum.—	"	72°	92°	78°.	"	29.67	29.60	29.60.
Minimum.—	"	52°	70°	57°.	"	29.30	29.25	29.22.

No Rain. Every day clear. Wind N. W.

METEOROLOGICAL OBSERVATIONS—Continued.

November, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8 A M.	2 P M.	8 P M.	8 A M.	2 P M.	8 P M.	
	○	○	○				
1	52	72	56	29.65	29.60	29.50	N. W., high wind, clear.
2	54	64	56	29.47	29.45	29.45	" gale, all day clear.
3	52	70	56	29.47	29.40	29.40	" " "
4	52	68	56	29.47	29.45	29.42	N. W., clear.
5	50	66	56	29.50	29.50	29.50	" "
6	52	68	56	29.50	29.50	29.50	" "
7	54	70	60	29.50	29.50	29.50	" "
8	54	64	60	29.50	29.50	29.50	W. N. W., mor. cloudy, P. M. clear.
9	50	58	50	29.70	29.70	29.70	N. W. daylight frost, clear.
10	52	58	52	29.72	29.70	29.65	" " eve. cloudy.
11	54	60	56	29.65	29.55	29.52	S. W., rain last night 9-100, cloudy.
12	54	62	52	29.47	29.45	29.30	" " 9-100.
13	52	60	52	29.40	29.40	29.40	S. W., mor. clear, M. cloudy and rain 1-100.
14	48	56	50	29.47	29.47	29.52	N. W., frost, clear, dew.
15	46	58	48	29.72	29.70	29.75	N. W., daylight, ice, clear.
16	44	56	48	29.82	29.77	29.72	" " "
17	45	56	50	29.70	29.62	29.60	" " "
18	46	60	54	29.60	29.55	29.55	" mor. cloudy, P. M. clear.
19	44	64	50	29.60	29.55	29.57	" clear.
20	42	58	52	29.65	29.55	29.50	" frost, clear.
21	42	60	52	29.35	29.22	29.27	South, heavy clouds.
22	48	58	52	29.37	29.42	29.50	N. E. and E. N. E., mor. frost, eve. drops
23	44	60	54	29.55	29.52	29.57	E. S. E. and N. E., frost, ev. cloudy. [rain.
24	50	56	52	29.60	29.62	29.60	South, rain 50-100, cloudy.
25	42	58	50	29.80	29.87	29.87	S. W., frost, fog and dew, 1-100 in.
26	40	58	48	29.95	29.90	29.90	" dense fog, dew, 1-100 in.
27	38	54	50	29.90	29.80	29.77	" " " 1-100 in.
28	42	52	50	29.75	29.72	29.72	South, " rain 1-100 in.
29	44	54	50	29.75	29.70	29.70	S. W., dense fog, drops rain.
30	44	60	54	29.72	29.67	29.65	South " rain and dew, 1-100 in.

		8 A M.	2 P M.	8 P M.		8 A M.	2 P M.	8 P M.
Mean Temp.—	Thermometer—	48°	57°	52°.	Barometer—	29.60	29.57	29.57.
Maximum.—	"	54°	72°	60°.	"	29.95	29.90	29.90.
Minimum.—	"	38°	52°	48°.	"	29.35	29.22	29.27.

Rain and dew, 74-100 inches. Clear days, 20 ; cloudy, 10.

METEOROLOGICAL OBSERVATIONS.—Continued.

December, 1855.

Day	Thermometer.			Barometer.			REMARKS.
	8 AM ○	2 PM ○	8 PM ○	8 A.M.	2 P.M.	8 P.M.	
1	42	58	50	29.77	29.72	29.72	South, clear.
2	42	54	50	29.72	29.70	29.75	S. E., dew, mor. cloudy and drops rain.
3	40	56	50	29.80	29.72	29.75	N. W., dew, clear.
4	48	62	52	29.70	29.62	29.62	South, mor. cloudy, eve. clear.
5	48	56	50	29.57	29.50	29.52	" cloudy, rain 20-100 in.
6	48	54	50	29.60	29.55	29.55	" " 10-100 in. S. W.
7	46	52	50	29.52	29.52	29.50	S. W., high wind and rain, 50-100 in. S.
8	48	54	50	29.80	29.80	29.82	South, clear.
9	48	60	54	29.82	29.77	29.75	S. E. "
10	48	60	54	29.67	29.60	29.57	S. W., mor. cloudy, drops rain.
11	44	60	52	29.62	29.52	29.52	N. W., dew, 1-100 clear.
12	42	60	50	29.65	29.70	29.75	" clear.
13	42	56	48	29.87	29.87	29.85	S. E., frost, clear, 8 P. M. drops rain.
14	44	54	44	29.85	29.80	29.77	N. W., clear.
15	44	52	48	29.75	29.75	29.77	" "
16	44	56	48	29.82	29.80	29.85	" "
17	48	58	52	29.87	29.77	29.75	S. W., cloudy, eve. S. E., clear.
18	50	56	50	29.75	29.67	29.67	S. E., mor. cloudy, eve. S. W., clear.
19	50	54	48	29.62	29.65	29.62	South, rain 10-100, mor., 5-100, south.
20	48	56	50	29.67	29.65	29.65	S. E., fog, dew, 1-100, eve. S. W.
21	50	54	50	29.70	29.65	29.65	S. W., rain 6-100, 2-100, 52-100 in.
22	50	56	50	29.60	29.55	29.57	S. W., rain 1-100, high wind.
23	36	48	38	29.60	29.52	29.55	W. S. W., fog, eve. cloudy, N. W.
24	28	44	40	29.70	29.70	29.75	N. W., very cold, ice $\frac{1}{4}$ of an inch.
25	32	40	38	29.80	29.75	29.67	" " ice, clear, south.
26	34	44	40	29.52	29.40	29.35	S. W., rain 15-100, 5-100, 27-100 and hail.
27	36	48	40	29.27	29.37	29.55	" rain 15-100, mor. 22-100, south.
28	30	42	34	29.82	29.77	29.72	N. W., fog and ice, north.
29	30	40	38	29.72	29.70	29.72	" " "
30	32	42	38	29.75	29.70	29.72	" " "
31	34	42	40	29.75	29.67	29.67	" frost and heavy fog, N. N. W.

		8 AM.	2 PM.	8 PM.		8 AM.	2 PM.	8 PM.
Mean Temp.—	Thermometer—	43°	53°	48°.	Barometer—	29.72	29.63	29.68.
Maximum.—	"	50°	62°	54°.	"	29.87	29.87	29.85.
Minimum.—	"	28°	40°	38°.	"	29.52	29.40	29.35.

Rain, 2 42-100 inches. Cloudy days, 14; clear days, 17.

RECAPITULATION.

METEOROLOGICAL OBSERVATIONS FROM 1850 TO 1856.

Month.	Monthly Mean of the Thermometer.			Clear Days.	Rainy Days.	WIND.
	8 A. M.	2 P. M.	8 P. M.			
1850.	°	°	°			
July	70	84	65	31		N. W.
August...	64	82	62	31		"
September	62	80	60	27	3	N. W., S. W.
October ..	62	78	58	27	4	" S. E.
November	56	67	54	25	5	" S. W.
December	44	65	44	21	10	" S. E.
1851.						
July	74	92	66	31		N. W.
August...	63	82	62	31		"
September	66	80	64	28	2	"
October ..	56	76	60	30		"
November	53	68	59	28	2	"
December	46	57	47	23	8	Variable.
1852.						
January ..	44	79	44	28	3	N. W., S. E.
February .	46	64	50	25	3	S. W.
March....	49	72	52	21	10	"
April	55	67	55	27	3	N. W.
May	65	79	60	29	2	"
June.....	68	88	74	29	1	"
July	72	95	65	30	1	"
August...	65	85	63	30	1	"
September	64	85	60	29	1	"
October ..	55	77	60	28	3	Changeable.
November	47	64	50	21	9	S. W., S. E.
December	44	54	45	16	15	" "

RECAPITULATION—CONTINUED.

Month	Monthly Mean of Thermom'r.			Monthly Mean of Barometer.			Clear Days.	Am't of Rain.	WIND.
	8 A. M.	2 P. M.	8 P. M.	8 A. M.	2 P. M.	8 P. M.			
1853	°	°	°	°	°	°			
Jan.	48	52	49	29·47	29·46	29·46	28	2·26	N. W., S. W.
Feb.	44	56	43	29·50	29·50	29·50	23	1·02	N. W.
Mar.	53	67	54	29·52	29·52	29·50	25	2·10	S. W., S. E.
Apr.	58	70	56	29·48	29·48	29·50	21	2·70	S. W.
May	64	75	63	29·47	29·48	29·47	25	1·15	N. N. W.
June	73	88	71	29·40	29·38	29·40	29		N. W.
July	72	88	70	29·45	29·44	29·43	30		"
Aug.	69	84	70	29·47	29·43	29·37	30		"
Sept.	64	82	65	29·40	29·43	29·42	30		"
Oct.	62	85	68	29·54	29·51	29·50	27		"
Nov.	51	65	55	29·47	29·49	29·49	26	0·60	N. W., S. E.
Dec.	40	62	43	29·58	29·57	29·55	21	1·80	N. W., S. W.
								11·63 inches.	

During the year, only 50 cloudy days—315 clear.

1854									
Jan.	34	58	40	29·62	29·62	29·61	24	2·64	N. W., S. E.
Feb.	42	60	48	29·56	29·56	29·57	14	8·94	S. W., S. E.
Mar.	47	64	50	29·53	29·52	29·51	25	3·60	S. E., S.
Apr.	54	75	58	29·50	29·50	29·48	18	3·24	S. W., N. W.
May	54	76	56	29·45	29·44	29·43	25	0·33	N. W.
June	61	82	64	29·46	29·46	29·45	26	1·00	"
July.	69	90	73	29·40	29·39	29·37	29	0·00	"
Aug.	66	83	71	29·41	29·41	29·39	29	0·00	"
Sept.	62	79	66	29·48	29·42	29·41	28	0·00	"
Oct.	59	72	61	29·54	29·50	29·50	22	0·31	N. W., N. E.
Nov.	55	69	56	29·62	29·62	29·59	28	0·01	N. W., E.
Dec.	42	59	48	29·69	29·69	29·66	29	0·23	"
								19·20	

During the year, 68 cloudy days—297 clear.

RACAPITULATION.—Continued.

Month	Monthly Mean of Thermom'er.			Monthly Mean of Barometer.			Clear Days.	Rainy Days.	WIND.
	8 A. M.	2 P. M.	8 P. M.	8 A. M.	2 P. M.	8 P. M.			
1855	°	°	°	°	°	°			
Jan.	44	54	47	29·63	29·61	29·60	27	2·90	N. W., S. W.
Feb.	49	62	54	29·60	29·57	29·53	21	2·74	S. W., S. E.
Mar.	56	65	59	29·54	29·53	29·52	22	2·20	S. E., S. W.
Apr.	58	66	58	29·57	29·58	29·56	20	3·29	S. W., S.
May	59	69	61	29·55	29·53	29·53	25	1·10	S. W., N. W.
June	69	83	75	29·37	29·37	29·37	29	0·00	N. W.
July	70	81	75	29·45	29·42	29·43	31	0·00	"
Aug.	70	88	74	29·47	29·44	29·41	31	0·00	"
Sept.	62	80	68	29·45	29·42	29·40	30	0·00	"
Oct.	64	82	70	29·55	29·55	29·47	31	0·00	"
Nov.	48	57	52	29·60	29·57	29·57	20	0·74	N. W., S.
Dec.	43	53	48	29·72	29·63	29·68	17	2 42	S. W., S. E.
								15·39	

During the year, 61 cloudy days—304 clear.

RECAPITULATION—Continued.

Year.	REMARKS.	8 A. M.	2 P. M.	8 P. M.
		°	°	°
In 1850.	The coldest day was Dec. 13, Thermometer	36	56	40
"	The warmest day, Aug. 24, "	76	100	75
"	The coldest month, December, Mean Temperature.	44	65	44
"	The warmest month, July, " ..	70	84	65
In 1851.	The coldest day was Dec. 17, Thermometer	38	52	42
"	The warmest day, July 20, "	78	98	76
"	The coldest month, December, Mean Temperature.	46	57	47
"	The warmest month, July, " ..	74	92	66
In 1852.	The coldest day was Dec. 15, Thermometer....	34	44	40
"	The warmest day, July 22, "	80	100	75
"	The coldest month, December, Mean Temperature.	44	54	45
"	The warmest month, July, " ..	72	95	60
In 1853.	The coldest day was Dec. 31, Thermometer....	28	56	38
"	The warmest day, June 16, "	82	100	82
"	The coldest month, December, Mean Temperature.	40	62	43
"	The warmest month, July, " ..	72	88	70
In 1854.	The coldest day was Jan. 20, Thermometer.....	18	48	24
"	The warmest day, July 8, "	70	98	76
"	The coldest month, January, Mean Temperature.	34	58	40
"	The warmest month, July, " ..	69	90	73
In 1855.	The coldest day was Dec. 24, Thermometer....	28	44	40
"	The warmest day, July 8, "	78	98	82
"	The coldest month, December, Mean Temperature	43	53	48
"	The warmest month, August, " ..	70	88	74

Since 1849 the coldest year was 1854. The coldest month, January. The coldest day, January 20.

In 1853, the whole amount of Rain was.....11·63 inches.
In 1854, " " 19·20 "
In 1855, " " 15·39 "

These observations, continued for a series of years, prove that the climate of this valley is unequalled; that the temperature is equable, subject to no sudden change, and that the extreme of heat and cold are unknown.

ROBERT K. REID, M. D.

Stockton, Cal., Dec. 31, 1855.

ANNUAL REPORT

OF THE

TREASURER OF THE INSANE ASYLUM

OF THE

STATE OF CALIFORNIA.

Stockton, Jaunuary, 1856.

To the Trustees of the Insane Asylum of California:

Gents:

I herewith submit to you my Report as Treasurer of the Asylum, to be submitted to the Legislature.

I have made a detailed statement, by items, of every expenditure, believing that such would be more satisfactory if not more useful than a mere general statement of the amount received and expended.

A. C. BAINE,

Treasurer of Insane Asylum of California.

REPORT.

W. W. Stevenson in Account with State Insane Asylum, Jan., 1855.

1855.		Dr.	
Jan. 20.	To amount of Physician's Salary for first quarter, advanced from Subsistence Fund, sold at 75 per cent....	$2,000	00
"	Also deposited as Subsistence Fund, sold at 75 per cent., being balance of Building Fund, Cash.....	3,384	66
"	To balance from last year.....	2,003	15
		$7,387	81

		Cr.	
Jan. 25.	By loss in Sale of Warrants.....	$500	00
	By Check on Building Fund, etc., deposited.....	3,384	66
	By amount paid Stevenson & Weeks.....	16	00
	By year's Salary, one-quarter.....	250	00
	By Servants' Salary.....	510	00
	By George H. Blake.....	15	00
	By B. Pararahana.....	37	12
	By J. K. Hatton.....	39	72
	By C. O. Burton.....	8	77
	By F. E. Corcoran.....	45	00
	By balance forward.....	2,561	54
		$7,387	81

W. W. Stevenson in Account with State Insane Asylum, Feb., 1855.

1855. Dr.

Feb. 1.	To balance from January		$2,561 54

Cr.

Feb. 1.	By amount paid	James Johnson	$6 00
	"	F. E. Corcoran	50 00
	"	C. B. Phelps & Co	618 47
	"	Sink & Hinkley	14 25
	"	Wm. Ward	569 14
	"	Alfred Taylor	42 38
	"	J. Gross & Co	414 30
	"	Matron and J. K. Hatton, salaries	316 66
	"	Webster & Wait	32 75
	"	Gove & Knight	369 11

W. W. Stevenson in Account with State Insane Asylum, March, 1855.

1855. Dr.

March 2.	To amount of Appropriation for Andrew Lester, sold at 74 cents, netting $6,290		$8,500 00

Cr.

March 2.	By loss on Warrants, 74 cents		$2,210 00
	Expense of Agent to San Francisco		20 00
" 24.	By amount paid	C. B. Phelps & Co	663 86
	" "	Sink & Hinkley	488 83
	" "	C. B. Phelps & Co	430 75
	" "	Gove & Knight	615 50
	" "	Webster & Wait	44 79
	" "	L. Lyon	57 00
	" "	Wm. Ward	679 74
	" "	C. S. Holden & Co	428 67
	" "	John Gross & Co	822 00
	" "	Hubbard & Luchingser	50 00
	" "	B. T. Butler	201 50
	" "	Stephen Bengen	199 34
	" "	J. K. Hatton, salary	333 33
	" "	Matron, salary	300 00
	" "	Fox & O'Connor	90 25
	" "	H. B. Underhill & Co	266 50
	" "	R. K. Eastman	9 00
	" "	Fairbanks & Osborn	198 00
	" "	W. H. Bond	30 00
	" "	C. O. Benton	42 38
	" "	Alfred Taylor	140 25
	" "	Balance on hand	222 00

W. W. Stevenson in Account with State Insane Asylum, April, 1855.

1855.			
	Dr.		
April 1.	To balances on hand, same forward to May 1st, 1855....	$2,222	00
May 5.	To Warrants from Controller of State, sold at 80 cts per $1	20,000	00
	Cr.		
May 3.	By amount expenses Ag't, in procuring and making Sale of Warrants	50	00
" 9.	By amount paid Wm. Ward	645	58
	" " Wm. Vance	150	00
	" " Washman's Bill	90	00
	" " Treasurer's Salary	250	00
	" Amount salaries of J. K. Hatton, Matron and Serv'ts.	3,611	66
	" Grove & Knight	433	24
	" Amount paid W. Ward, S. A. Hurlburt and A. Taylor in one Check	1,858	68
	By amount paid J. K. Hatton, (cash advanced)	226	92
	" " Wm. Ward	1,378	22
	" " Fox & O'Connor, (four bills)	379	75
	" " J. Mains & Co	34	50
	" " H. B. Underhill	120	00
	" " Samuel Lyon	694	19
	" " H. Hickman	16	25
	" " Pat. Gallagher	12	00
	" " Stephen Benger	78	45
	" " E. S. Holden	450	89
	" " Republican Office	120	00
	" " S. A. Hurlburt (bal.)	30	00
April 9.	" " H. Hugg & Co	664	86
	" " J. Gross & Co	1,981	03
	" " C. B. Phelps & Co	1,039	20
	" " Sanders & Hickman	75	74
10.	" " Stephen Benger	66	12
	" " Hermey & Fowler	42	88
May 10.	" " J. Wails	46	25
	" " R. Fowler	19	00
	" " Webster & Waite	104	23
	" " R. S. Bates	312	04
	" " Wm. Roberts	21	50
12.	" " C. O. Burton	49	63
	" " Bowen & Houche	27	00
	" " Fold & Nye	45	00
	" " M. Walpin	75	00
	" " J. W. Whitney & Co	18	00
	" " Sanders & Hickman	10	00
	" " J. Mitchell	25	00
	" " Horton & Smith	45	00
	" " Steamer Cornelia	18	00
	" " Mrs. M. B. Griswold	4	00
	" " Steamer Cornelia	9	00
	By reduction on Sale of Warrants at 80 cents	4,000	00

W. W. Stevenson in Account with State Insane Asylum, June, 1855.

1855. Dr.

June 1.	To balance	$982 97

Cr.

June 7.	By amount paid	W. B. Morrell	$25 00
	" "	Servants' Wages	625 00
	" "	C. P. Greenley	12 00
	" "	Steamer Urilda	15 00
	" "	P. S. Dustin	83 79
	By balance		222 18
			$982 27
	By past Salary as Treasurer		200 00
	By balance		22 18

A. C. Baine in Account with State Insane Asylum, July, 1855.

1855.	Dr.		
July 3.	To amount of Controllers' Warrants from Capt. Taylor for Subsistence Fund, $8,276 66		
	To same for Furnishing Fund $5,000		
	" Cash, W. W. Stevenson, late Treasurer		$22 43
	" Controllers' Warrants on account of Physician's Salary, $4,000		
Aug. 14.	To Cash from Sale of Controllers' Warrants for Subsistence Fund		7,459 35
	To Cash from Sale of Controllers' Warrants for Furnishing Fund		4,506 25
			$11,988 03

	Cr.		
July 11.	By Controllers' Warrants paid W. D. Cowan, Assistant Physician	$1,500 00	
12.	By same paid Mr. Reid, Resident Physician.	2,500 00	
		$4,000 00	
Aug. 14.	By amount paid Wane's (two) accounts		$1,786 02
	" " Gray & Hickman		530 64
	" " Sanders & Hickman		127 25
	" " Employees Asylum		1,750 00
15.	" " Coffin's (two) accounts		659 00
	" " L. Lyons' bill		76 78
	" " E. Holden		220 63
	" " Ashley & Mead		6 00
	" " W. D. Cowan ($1,017 81)		55 00
20.	" " S. P. Burgen		88 98
	" " Fox & O'Connor		327 25
	" " J. K. Hatton		406 82
	" " C. O. Burton		42 08
	" " John H. Hatton		44 44
	" " John Gross & Co		825 65
	" " Wm. M. Baggs		38 70
	" " Thomas Siley		60 41
22.	" " B. B. Eastman		9 00
29.	" " Webster and Wait		62 87
30.	" " Grove & Knight		96 59
	By transfer of amount of Furnishing Fund to that Account		4,506 25
			$11,706 76
	By Cash on hand, Aug. 31st		281 27
			$11,988 03

A. C. Baine in account with State Insane Asylum, Sept. 1855.

1855. DR.

Sept. 1.	To amount cash on hand August 31, 1855		$281 27
	" Controllers' Warrant No. 265, issued for subsistence, dated Aug. 16, 1855, for	$4,150 00	
12.	" Controllers' Warrant No. 364, issued as above, Sept. 10, 1855, for	4,150 00	
		$8,300 00	
Oct. 10.	" Controllers' Warrant No 343, issued Oct. 8th, for subsistence,	4,460 00	
	" Controllers' Warrant No. 442, issued for Physicians	1,250 00	
	" Same for same, No 444	750 00	
17.	" Proceeds of Warrants Nos. 265, 354, 442—sold at 80¼ cents per dollar		10,213 83
			$10,495 10

CR.

Sept. 11.	By ascertained mistake in the addition of the first four items of credits		$10 10
	" amount of J. Wait's account		82 25
8.	" amount paid Hugg & Co		218 75
Oct. 18.	" amount paid W. Ward (Aug.)		541 79
	" amount paid W. D. Cowan, July		55 44
19.	" H. W. Gellingham & Co.'s account, July and Aug.		588 16
	" Webster & Wait's " " "		108 26
	" Ward & Brown's account, July		785 90
16.	" payment to Dr. Reid Controllers' Warrant No. 443	$1,250 00	
19.	" A. Taylor's account, July		81 35
	" " " August		74 25
	" employee's account, July	$2,000 63	960 00
16.	" payment to Dr. Cowan Controllers' Warrant No. 444	$750 00	
20.	" Gove & Knight's account, July		6 75
	" S. Benjamin's account, July and August		132 76
	" Coffin & Co.'s account, July and August		427 82
	" Simpson's account, July		60 00
	" E. S. Holden's account, July and August		282 38
	" Gray & Hickman's account, July and August		114 30
	" C. O. Burton's account		60 63
	" Fox & O'Connor's account		149 00
	" W. D. Cowan's account, August		49 14
	" Jno. Gross & Co.'s account, July and August		920 72
	" Gray & Hickman's account, August		48 25
	" W. M. Baggs' account, August		5 75
	" Thos. Siley's account, August		73 64

Oct. 20.	" H. Hugg & Co.'s account, balance June and July ..	$267 74
	" Steinheiser & Co.'s account, June	13 50
	" H. Mitchell & Co.'s account, July.....	34 50
		$7,045 56
	" this amount of cash.....	3,449 54
		$10,495 10

A. C. Baine in account with State Insane Asylum, Oct. and Nov., 1855.

1855. Dr.

Oct. 20.	To this amount of cash.....	$3,449 54
	" amount transferred to Subsistence Fund from the Building Fund, ($80,000 appropriation), by order of the Board, on the 4th October, 1855.....	365 15
	" amount credited to this fund, Aug. 20th, (P. S. Burgen's account), which should be and is placed to account of $80,000 appropriation	88 98
		$3,903 67

Cr.

Oct. 25.	By Ald. Taylor's account for Sept.....	67 50
	" C. O. Burton's account for Sept.....	29 25
	" H. W. Gillingham's account for Sept.....	294 00
	" Ward & Brown's " "	508 10
	" Gray & Hickman's " "	34 94
	" Fox & O'Connor's " "	78 00
	" Coffin & Co's " "	138 78
	" Jno. Gross & Co. " "	500 00
	" W. D. Cowan's " "	90 93
	" W. Roberts' " "	19 00
	" P. Detson's " Sept. and Aug.	117 29
	" E. S. Holden's " Sept.	100 00
	" Webster & Wait's " Sept.	17 50
	" Bates & Hale	200 69
	" B. S. Bates, May acc't.....	34 67
	" A. C. Baines, quarterly salary to 1st inst.....	250 00
26.	" John Minge's account for May.....	12 75
	" J. M. Duffington's acc't for July.....	16 29
	" Steamer Cornelia, March and July	28 00
Nov. 17.	" Thomas Marshall's acc't	64 00
20.	" Horton & Smith's acc't, Sept.....	15 00
11.	" Employee's acc't, Sept.....	885 00
30.	" W. M. Sish's acc't for Aug. and Sept.....	262 13
	By balance.....	141 85
		$3,903 67

A. C. Baine in account with State Insane Asylum, Dec. 1855.

1855.			
	Dr.		
Dec. 1.	To this amount cash on hand		$141 85
	" Controllers' Warrant No. 528, dated Nov. 23d, 1855, for	$4,460 00	
11.	" Controllers' Warrant No. 651, dated Dec. 11th, 1855, for	4,460 00	
		$8,920 00	
1856.			
Jan. 14.	To this amount returned from committee purchasing pump for kitchen, and transferred to this fund		17 25
	" this amount received from sale of Warrants No. 528 and 651, at 80⅛ cts.		7,147 15
			$7,306 25
	Cr.		
1855.			
Dec. 8.	By Thos. Galpin's account, Sept.		$100 00
14.	" P. E. Connor's acc't		12 00
1856.			
Jan. 15.	" Ward & Brown's account, Nov.		650 53
	" Webster & Wait, " Oct. and Nov.		79 53
	" P. Ditson, " "		56 36
	" Ward & Brown " "		647 00
	" W. D. Cowan, " "		116 68
	" W. Coane, " Nov.		30 25
	" Gray & Hickman, " Oct. and Nov.		278 61
	" Sanders & Hickman, " Nov.		72 94
	" W. H. Neal & Co., " Oct.		185 82
	" W. H. Gillingham, " Oct. and Nov.		584 79
	" Fox & O'Connor, " "		137 00
	" Mitchell & Co., " Nov.		66 00
	" J. Waites, " Oct.		36 00
	" E. S. Holden, " Oct. and Nov.		213 30
	" Employees, " "		1,770 00
	" Voucher 17 for Nov., small accounts		34 00
	" H. B. Underhill & Co.'s account, July		7 00
	" W. D. Cowan, " Nov.		80 00
	" Jno. Gross & Co. " Oct. and Nov.		947 00
	" A. Taylor, " "		137 25
	" Bates & Hale, " "		235 14
	" S. Burgin, " Oct.		31 00
	" C. O. Burton, " Oct. and Nov.		44 75
18.	" balance		754 30
			$7,306 25

A. C. Baine in account with State Insane Asylum, 1855.

1855.	Dr.	
July 14.	To this amount received from the late Treasurer, Stevenson, (of the $80,000 fund)	$2,592 00
	Cr.	
July 21.	By Luchingser & Hubbard's bill	386 50
Aug. 3.	" P. Grove's bill	297 75
5.	" B. Lavin's bill	50 00
14.	" F. E. Corcorain's bill	440 21
Oct. 4.	" this amount transferred to Subsistence Fund, by order of the Board	365 21
Aug. 20.	" amount paid S. Burgin's acc't, erroneously placed to Sub. Fund acc't	88 98
Dec. 8.	" B. C. Carter's account	110 00
"	" " "	100 00
1856.		
Jan. 18.	By amount paid Superintendent for erecting kitchen, ordered to be paid from this fund	368 00
	" amount paid S. Burgin's account	80 00
	By balance of this fund	305 41
		$2,592 00

A. C. Baine in account with the State Insane Asylum, for Coal on account of the Fund appropriated for furnishing the Asylum.

1855.	Dr.	
Aug. 14.	To amount realized from the sale of the $5,000 Controllers' Warrant	$4,506 25
Nov. 15.	To this amount returned to me by Doct. Reid	200 00
	Cr.	
Aug. 15.	By amount Luchingser & Hubbard's acc't	360 00
Sept. 10.	" amount paid Doct. Reid, under a resolution of the Board, to buy furniture	3,000 00
1856.		
Jan'y 8.	" P. Vizard's account	168 00
		$3,528 00
	Balance	1,278 00

A. C. Baine in Account with State Insane Asylum, for Appropriation to Erect a Kitchen.

Dr.

Sept. 12.	To Controllers' Warrant No. 355, audited Sept. 10, 1855		$2,866 67
"	"	356, " "	2,866 67
"	"	357, " "	2,866 67
"	"	358, " "	900 00
"	"	359, " "	500 00

Cr.

Sept. 12.	By payment of the three first mentioned to Milman, the Contractor	$8,600 01
	By payment of the $500 Warrant, No. 359, to the Superintendent	500 00

Dr.

Sept. 12.	To Cash received from the $900 Warrant and which cancels it, sold at 80⅛ cents Cash	$731 25

Cr.

Oct. 25.	W. Brien's account	$36 00
26.	J. H. Indmin's	62 88
Nov. 1.	Steamer Cornelia	40 00
3.	H. C. Patrick & Co	36 00
16.	F. E. Corcoran	100 00
	S. Burgen's	88 84
Dec. 4.	By B. L. Bouldins	100 00
	By amount paid Committee by order of the Board, to buy Force Pump for Kitchen	280 00
		$743 72
	Overdrawn	$12 47

Dr.

To aggregate of balance of the Special Funds:

Balance $80,000 appropriation	$305 41
Balance Furnishing Fund	1,278 00
	$1,583 41
Deduct amount overdrawn for Kitchen Fund	12 47

1856. Cr.

Jan. 29.	By amount paid J. H. Milman, as per allowance of the Board for extra work	$895 00
	" balance transferred to Subsistence Fund, by order of the Board	675 94
		$1,570 94

Document No. 14.

IN SENATE.] [SESSION OF 1856.

REPORT

ON THE

GEOLOGY

OF

NORTHERN AND SOUTHERN CALIFORNIA,

EMBRACING THE

MINERAL AND AGRICULTURAL RESOURCES OF THOSE SECTIONS;

WITH

STATISTICS OF THE NORTHERN, SOUTHERN AND MIDDLE MINES.

BY DR. JOHN B. TRASK.

JAMES ALLEN, STATE PRINTER.

COMMUNICATION FROM STATE GEOLOGIST.

Sacramento, March 1, 1856.

To His Excellency, J. Neely Johnson,
Governor of the State of California:

My Dear Sir:

Pursuant to an Act passed in May last, by the Senate and Assembly of the State of California, authorizing a further examination of the unexplored portions of this State, and relating to their geological peculiarities and economical adaptations, I have the honor through you to submit the following Report:

Yours, etc.,

JOHN B. TRASK.

COMMUNICATION FROM GOVERNOR

EXECUTIVE DEPARTMENT,
Sacramento, March 11, 1856.

To the Senate of California:

I have the honor herewith to transmit the Fourth Annual Report of Dr. J. B. Trask, State Geologist.

Respectfully,
Your obdient Servant,

J. NEELY JOHNSON.

PREFACE.

In the early part of June the tour for 1855 was entered upon, and continued uninterruptedly till the middle of January, 1856, comprising a period of nearly eight months of actual labor in the field. With the exception of eighteen days, during which time I lay sick at Shasta City with the malarious disease contracted in the Sacramento Valley in the discharge of my duties, I have been engaged in examining the mineral and agricultural capacities of those portions of the State over which my route led me, and noting their economical adaptations. The first part of the season was spent in the line of counties extending from Marin to the south part of Mendocino, and included between the coast and Sacramento River, and crossing the coast chain in a diagonal direction, across the south-east and east part of the County of Humboldt, again to the plains. Subsequent to this, my course was directed to the northern counties, through Shasta, a portion of Klamath and Siskiyou. On the Upper Trinity, the head waters of Salmon and Scott Rivers, much of my time was spent in exploring the tolerably rugged mountains of this part of the State.

The Salmon was examined as far down as the junction of the forks, and the Scott River was followed from six miles above the junction of the South Fork, down the main stream for twenty-five miles. After leaving the Scott River I passed down the Scott Valley, and over the low ridges which divide this from the Shasta and Yreka Plains, on to the town of Yreka. After leaving this locality I traveled through the valley of Shasta River and down that river to its junction with the Klamath. Leaving this stream at this point, on account of the difficulty of traveling along its course, I again struck it at two points below.

During this part of the season the Indian troubles that existed in this part of the State, rendered traveling alone a dangerous undertaking, and as the season was considerably advanced, being then near the latter part of August, I retraced my steps, and reached the Sacramento in the early part of September. I then took up my route for the southern part of the State, and spent the months of October and November in those districts, as far south as the San Bernardino.

Returning from thence, the balance of the season was spent in the mining portions of the State, the line traveled over extending from the branches of the Feather, through to Mariposa, at which time I closed my labors in the field.

REPORT.

This Report will embrace a portion of the counties lying in the Coast Mountains, north of the Bay of San Francisco. The counties included extend from Marin to near the northern line of Siskiyou, including the following: Marin, Sonoma, Napa, Solano, part of Mendocino and Humboldt, with portions of Shasta, Trinity, the east part of Klamath and Siskiyou.

PHYSICAL GEOGRAPHY.

The above portion of the State is made up, for the most part, of mountain ridges having precipitous flanks, with deep, rugged, and in many cases, almost impassable cañons. The ridges of the mountains preserve a great degree of parallelism for the greater part of their course, or until after passing the fortieth parallel of north latitude, when they become more rugged, elevated and confused, losing the peculiar characteristics noticeable in their more southern parts.

Between these ridges lie more or less extended valleys at different elevations, some of which are of considerable magnitude and form the great agricultural regions of this portion of the State. Bounding these valleys are high, rolling hills, covered with the indigenous grasses and wild oats which furnish the grazing lands for the large herds that abound in this region. On the line, two or three large bays indent the coast, the more interesting of which is that of Tourales.

The gap in the mountains which admits this bay, is about fifteen miles long, and from one to two miles in breadth; on the south-west point Tourales forms one side, extending in a south-west direction, and terminating finally in the high hills running northward from Touralpias, and on the opposite side, the high ridge which attains an elevation of about 1,400 feet as it approaches the hills in the vicinity of San Rafael.

Between the two ridges, and near the bend of the bay, a lower gap occurs which readily admits the strong sea winds met so abruptly in passing up the straits leading from the Bay of San Francisco to that of San Pablo. This peculiarity will be noticed more at length in the following pages, as it will be found to exert a strong influence on the economical adaptations of the country within its range. From Tourales, northward, until arriving at Bodega, the country is made up of low mountains; and after passing this point the mountains assume a much more rugged and elevated character to Cape Mendocino, being but a succession of ridges and cañons all the way for that distance, with small and fertile valleys included.

Eastward from Fort Ross few persons have traveled, and fewer still will probably ever attempt to describe that portion of the mountain ridges; it is frequented only by the hunter, its rugged character rendering it unadapted to other uses.

Between the western or ocean ridges and the first high ranges to the east, lies the extensive valley of Petaluma, the length of which, between its extremes proper, is forty miles, with a varying width from eight to fourteen miles. Separated from this by a range of hills is the valley of Russian River, an elevated fertile plain of about seventeen miles in extent, and which ceases at the great bend of that stream at the point where the river cañons, and in the vicinity of twenty-five miles from the coast.

Near the head of Russian River, and between that stream and the waters of Clear Lake, stands the high truncated summit of Mount Helen; upon its summit, fastened to the solid rock, is a plate of copper bearing a Russian inscription.

North and west of the mountain extend a line of rugged, barren, volcanic peaks at a short distance from the edge of the valley which skirts the lake; and again, upon its north-west and northern end the same wild features abound. These mountains are covered, to a greater or less extent, with volcanic glass, most unmistakeable evidence of their recent origin.

This lake, situated at a considerable elevation in these mountains, is not far from twenty-five miles in length, with a variable breadth of from one to seven or nine miles. The valley forming its shores is well timbered and possesses high productive capacities if properly tilled. This lake furnishes the principal water for Cache and Puta Creeks, which reaches the Sacramento through the tule marshes that border that stream to the south-east of where those streams emerge from the mountains.

Traveling in a northerly direction from the north border of this sheet of water, you cross two ridges giving rise to several streams that flow into the Sacramento for forty miles beyond, when an oblique line of ridges commence, bearing a more westerly direction than those of the preceding portions of the mountains spoken of, and whose western flanks form the shed, furnishing the southern tributaries of the South Trinity and Lower Klamath with part of their waters, which are thus discharged directly into the Pacific Ocean. South of the preceding, there are several other streams furnished from these mountains, which discharge their waters at various points along the line of the coast.

From the head of Stone Creek I reached the valley sections of the Sacramento, and arriving at Shasta, again went over a portion of the route of the preceding year, to the base of that part of the Coast Mountains known as the Trinity Mountains, and crossed the latter from the waters of Clear Creek about eighteen miles above the point crossed in 1854. These mountains maintain an average hight for their entire length of nearly or quite four thousand feet and bear a westerly bend; the distance from base to base being about twelve miles. I have crossed this ridge at four different points, but never at a less distance than nine miles. They divide the waters of the Trinity and Clear Creeks; the one flowing into the Pacific by the Klamath, and the latter into the same ocean by the Sacramento. After crossing these mountains and the streams at their base, the route lies for the most part on or near the river. This portion of the stream is Steward's Fork, (improperly called the "North Fork," the North Fork proper being situated some thirty miles below Gibb's Ferry,) and may be followed with ease nearly to its sources, being fordable at short distances for its entire length.

The ridge dividing the Trinity from the Salmon is an elevated, rough and rocky group of jagged peaks, having an average hight of about five thousand feet. On their southern slope there is nothing of interest, but on the northern declivities there are to be found the local drift deposits, which are observable on the flanks of the Sierra Nevada.

The route usually followed leads to the east of these mountains at a distance of eight miles, and up the cañons of Steward's Fork to the base of Scott's Mountain, which is but a spur of the Salmon Mountains, and divides the waters of the Trinity, Salmon and Scott's Rivers at this particular point.

The distance across the Scott's Mountain is about eight miles, though usually estimated much higher than this amount, from the difficulty of making passage and the time required in consequence of the rocky character of the trail.

Immediately on reaching the base of this mountain to the north, you enter the head of Scott's Valley near Callahan's Ranch. At this point the South Fork of the Scott joins the main stream, which winds through this broad plain on the western side and its center, for twenty-eight miles, or to a point nearly opposite Fort Jones. From there the stream assumes a more westerly turn and joins the Klamath some forty miles from the above named point.

At a short distance beyond the Fort the road down the valley turns short to the right and follows this northerly course for about twenty miles all the way on the level of the plain. At this point a low mountain intervenes, which separates the Scott's River Valley from that of the valley of the Shasta River, lying to the east, and that of the smaller valley of Yreka about seven miles to the north of its base. The latter valley is but a branch of the valley of Shasta River and has received its name from the building of the city near its center.

Among the higher southern ridges of those mountains which divide the two large valleys above noted, the Shasta River has its rise, and not as has generally been supposed and stated, in the mountains of Shasta Peak. This mountain and adjacent hills furnish the waters at the sources of the Sacramento on the south, east and west, and on its northern flank throws off two of the southern tributaries of the Klamath. I think that at least six-tenths of the waters derived from Mount Shasta, find their way to the ocean by the Sacramento, and this mountain furnishes the principal, and in fact the sources of that stream.

This, it will be seen, modifies our views much respecting the geographical features and positions of this part of the State, and teaches us the fact that the latter river belongs strictly to the Coast Mountains, and not to the Sierra Nevada, as heretofore represented.

I am thus particular in this respect, for the reason that so many palpable errors have crept into our local geography, that the utmost disorder at present prevails, and thus far this matter seems governed by one general law, viz: the law of general confusion only. After crossing the Shasta River, we find little else than rugged hills, until arriving at the Klamath, and here those hills assume, and pass into the range known as the Siskiyou Mountains, which continue nearly to the coast, the Klamath winding its course at their southern base. To speak of these mountains would be but a reiteration of what has been said of others belonging to the coast mountains, and it is unnecessary to say more relating to them until we come to consider their geological structure, and influences on the climate of the surrounding country.

GEOLOGICAL STRUCTURE OF COAST MOUNTAINS NORTH OF THE BAY OF SAN FRANCISCO.

The geological structure of this portion of the State has been treated of to some extent, but there are additional points relating thereto that require some attention. The district of country from the northern shores of the Gate to the head of the Arroya San Antonio, have heretofore been treated of by others; that portion will therefore be passed over in order to avoid repetition. Our present examination will commence near the head of the above arroya, and continue through those parts of the mountains not before noticed.

From the known character of the rocks, both primitive and sedimentary, that abound along the shores of our large bays, and from thence extend to some distance into the interior, it might at first be thought that an easy inference could be drawn of the character of the country to the north-west—having so many of the general external features that appear in preceding districts—but such is not the fact, for soon after leaving the coast line of the bays, we enter a widely different character of rocks from those found near them on the head of the San Antonio, the serpentine and other primitive rocks which are found from this point southward, cease. The country from thence northward, to the town of Petaluma, assumes a new aspect, the rocks changing from the primitive groups to those of recently volcanic origin. So far as my examinations extended, these latter did not in any case present the slightest trace of any one of the sedimentary rocks, excepting the local drifts.

The entire group which underlies this part of the country is of a basaltic character exclusively, having in some cases the massive form, in others again the true columnar structure. At the distance of about one mile westward of the town of Petaluma the latter characteristic may be conveniently examined, for at this point the basaltic columns are being quarried for the purpose of erecting buildings at this flourishing place. At this locality the prisms are usually about six feet in length each, and regularly pentagonal in form, standing upright, and on a prism of equal diameter in breadth. This enables them to be thrown down easily, after which they are cut into sections of the required thickness, and used for the purpose above named.

This group of rocks extend in a westerly direction, to within three or four miles of the coast, but are not found upon the shore line, with the exception of one instance, and this occurs about six miles south-east of Lopes Embarcadero, on Tomales Bay.

In a northerly direction and among the high hills skirting the valley of Petaluma, these rocks are traceable for thirty or forty miles, after which they give place to the primitive rocks again, which continue on the ridge fronting the coast for fifty miles further on towards Mendocino.

To localize more particularly the boundaries of the volcanic rocks westward from Petaluma, it will be necessary to state, that near the crossing of the Estero Americano, on the Bodega Road, the first out-cross of the primitive series is found, surmounted by the same fossiliferous rocks as those of Monte Diablo. This is the first instance in which the latter rocks are met with on this line of travel. It is interesting to observe the regularity that presents itself in these particulars, for this deposit of marine fossils fixes the relative age of these distant points, and shows us more plainly their cotemporaneous origin. The primitive rocks and the fossiliferous group resting upon them are tilted to the west, and at the contact of the volcanic and primitive groups the most unmistakable evidences of change in structure is apparent.

In view of these facts it may not be amiss in reasoning upon this subject, and in considering the relative ages of plutonic rocks, not to place too strong a stress on more isolated facts, which might lead us to suppose that a *primitive* group may be of more recent age than those of known modern deposits.

The basaltic rocks of this district are clearly post-tertiary, but I am inclined to the belief that the statements made, of the primitive rocks of San Francisco being of that age, will admit of some argument, though I do not design to discuss that question in this place.

From Tomales Point (which is of granite), southward, and from the same point

northward, the coast line of mountains to Fort Ross are of the same primitive character, being made up of rocks of the granite series, imposed upon which are those of sedimentary origin.

The latter class consists for the most part of a coarse conglomerate, alternated at distant intervals with small beds of the coarse brown and yellowish sandstone incident to almost every other part of the coast line from one extreme of the State to the other. The latter beds contain marine mollusca in the fossil state, but none were observed in the conglomerates which lie superior to them. At Bodega Head several beds of these conglomerates are found; and the point forming the reef at this place is of the same character.

There is reason to believe that this conglomerate is auriferous; and subsequent to my visit to these localities gold was found in small quantities among the debris of these rocks. At Point Tomales on the west shore of the bay, gold also abounds, but in small quantity. It is found about one mile from the northern end of the point, near the settlements on that shore.

Leaving the coast line and passing into the interior, we find the geological character of the country changing in a material degree. At the distance of twenty miles from the coast and east of Fort Ross, the volcanic rocks again make their appearance, and continue northward and eastward almost uninterrupted for sixty or seventy miles. Occasionally an isolated group of some of the primitive series is met with in these ranges, and when this is the case more or less of the marine tertiaries accompany them. All that were met with have apparently the same relative age as those of the Monte Diablo groups.

Among the mountains on the south-west and west of Clear Lake, there are large masses of scorial associated with alsidian, (volcanic glass), which is spread broadcast among these hills, thrown out from recent craters, often met with in this part of the State.

Among the basalts of the country south and about the Petaluma district, no scoria was found in place that had the appearance of having been ejected in the vicinity, but a plentiful supply is found upon the surface, all of which are evidently transported masses from the more northern sections.

At first it is somewhat difficult to account for these features in the lower lands of this plain, as there seemed no adequate cause for producing so extensive a local deposit, as no river runs through this valley at the present time. In some examinations made in the earth thrown from a well on the premises of Judge Thomson, the secret was in some measure explained; for here the shells of several fresh water molluscas of the genus *unio*, and parts of a crustacean, (probably *astacus*), were found at the depth of eighteen or twenty feet below the surface.

On subsequent examination of the plain, an old river bed was traced for nearly its entire length, having two distinct terraces on each side. This ancient bed was followed to within about two miles of the present bed of Russian River, from which it is divided by a very low range of hills, and here the former bed is entirely effaced.

Near this point, (which is called Russian River Valley,) the Russian River Cañons suddenly breaks through the primitive rocks in a broad chasm, the bend at this place forming almost three sides of a parallelogram.

I have no doubt from the present position of the stream that it has been diverted from its course, which was originally through the great valley of the south, and forced into its present bed during those violent convulsions that, at a comparatively recent period, must have disturbed this entire section. A stream of the capacity of the above would be amply sufficient to account for the local drift of this plain, and which cannot be well explained on any other hypothesis.

On the eastern side of the Petaluma Valley, a range or spur of low mountains separates the former from the Valley of Sonoma. These mountains are made

up of the same materials as those to the west, but at their southern extremity there is a small out-crop of the primitive rocks.

These two valleys unite a few miles north of the Guilicus, and are, in fact, but one plain, being divided into two branches by the group of low mountains above alluded to.

On both flanks of the ridge in the middle of this plain, and at elevations varying from two to five hundred feet above the sea, are to be found beds of an infusorial deposit in a fossil state, of considerable thickness. These beds are made up of the siliceous coverings of the Diatomaceæ principally. On the west flank of the mountain north of Santa Rosa, they extend for a distance of twelve miles, making the entire length of these deposits on this line of ridges about twenty-eight miles.

Crossing a similar ridge from Sonoma to Napa Valley, which is about twelve miles across, the same deposits are met with on both flanks of the mountain skirting the Napa Valley, and they extend in an easterly direction across the southern spurs of the range to the declivities of the Coast Mountains, forming the west boundaries of the Sacramento Plains, and as far north on that flank as Puta Creek, beyond which point I have, as yet, been unable to trace them.

This deposit bears the common name of "Chalk Rock" throughout this part of the country. In all the points at which an opportunity has offered for examination, these fossil deposits were found reposing on the primitive series, associated or unassociated with others of the sedimentary group; in some cases the latter were filled with other marine fossils, but in most instances they were destitute of organic remains.

MINERAL CHARACTER OF THE PRIMITIVE ROCKS OF THE COAST MOUNTAINS.

Among the primitive rocks of the above district the granite series was most predominant. These consisted of coarse granite, mica, schists, sienites, with occasional patches of the serpentine rocks. The granites were mostly micaceous, and the seams often contained epidote.

It was a frequent occurrence to find small veins of quartz running through the series in almost every part of it. The drift derived from the breaking down of this series, contains a large proportion of this material, sufficient to attract attention in passing over almost any part of these plains.

Magnetic sand was observed in most of the small streams, and the sulphuret of iron in a few localities. In the vicinity of the Sulphur Springs at the head of Napa Valley, and in the trappean rocks of that district, this latter mineral is abundant. It is owing to the presence of this mineral at these springs that they derive their sulphurous odor.

SOILS OF PETALUMA VALLEY.

From the character of the rocks above described, and which compose the mountains that surround this and the adjoining valleys, it will be easy to infer the character of a soil derived from such materials.

Accordingly, we find on most of the lower bottoms, a *compost*, it might almost be said, that in itself would be adequate to the production of almost any crop that might be placed upon it. In the immediate vicinity of the recent volcanic rocks the soil is soft and mellow, being much superior to that on the bottom lands of the plain. On these bottom lands there is an intimate mixture of the arenaceous

materials found upon the hills to the north, which causes the texture of the soil to become much lighter and more susceptible to the influences of heat which supervene in the earlier part of the seasons.

On the more elevated portions of this plain the soil is made up of a coarser material with a strong admixture of small gravel, which gives the impression of harshness and sterility to some extent, but a closer examination develops the fact that these grounds are equally capable of production with those of the bottoms.

All portions of this plain and its branches are not susceptible of cultivation to the same extent as the above, for the reason, that in the vicinity of the lateral plains there are to be found beds of coarse, arenaceous rocks resting on patches of the granite, which have played an important part in making up the soils of those districts. Although the material composing these grounds is sufficiently comminuted for ordinary purposes of agriculture, still they will prove unprofitable for cropping, from the uncertainty to which they will always be liable, resulting from a deficiency in the elements necessary to produce the cereals in particular. In grounds of this character, two years has been sufficient to render these lands totally unadapted to the production of wheat, though barley and oats thrive fairly upon them still; this results evidently from a deficiency of the phosphates and lime, which are almost imperceptible in their productions or the soils themselves. I have conversed with farmers in this and the adjoining valleys, and found a very erroneous opinion existing as to the character of the soil and the presence of lime in the adjoining hills. The white, siliceous deposit of the infusoria was mistaken for calcareous rocks, arising probably from the name of *chalk* being ordinarily applied to this material.

That the grounds forming the main body of the Petaluma Valley proper are, for the most part, well adapted to the produce of wheat, barley and oats, still it is, in my opinion, very questionable if these crops can succeed well in this district, those of oats and wheat more particularly. The reason of this is most obvious, and is dependent on climatic influences entirely.

One of the great causes operating to induce a loss in this species of cropping being the universality of the *rust*, to which they must be constantly liable—according to our present information respecting the causes of its appearance. It is a matter of no small moment with the agriculturalist of this part of the State to determine this matter satisfactorily and weigh all the evidences pertaining to this point; and if he proceeds otherwise he incurs the risk of a loss of his labor and expenses in the introduction of crops. During the past year an extended range of the agricultural portions of this part of the State was traveled over by myself and nearly all the peculiarities relating to the grain crops noted; and I may state it as a general fact, that all the wheat, and of whatever variety, suffered almost total destruction from the supervention of the *rust* at the period of the milk, in this and the adjoining valleys to the east, as far as the Bucca Valley, *that came within the range of the cool winds of the ocean*. A field that was healthy to-day would in *forty-eight* hours become valueless, so sudden were the effects produced upon these crops.

The wheat alone is not the only thing that suffers, for we find that the wild oats that cover the hills is affected in a like degree, and to that extent that cattle refuse to feed upon it. I heard of but four instances in which the cultivated oat was affected.

This, however, is sufficient to show that there is an uncertainty existing touching these two grains, that should demand the careful attention of the farmer situated in these sections.

On a preceding page of this Report I stated, under the head of "Physical Geography," that the position of the mountains forming the Coast Range would be considered again in relation to this subject.

The trend of the ridges extending from the interior to the Coast Line is usually about north-west, and this position is maintained from Fort Ross to Punta Reys.

The winds that prevail on the coast during the summer and spring months are in nearly the same direction, and thus finds a long line of direct avenues whereby it reaches the interior loaded with moisture from the ocean, appearing, as it enters the interior through these gaps, in the form of dense, cold fogs.

It is from this cause that we experience the strong winds on the Bay of San Pablo in the evening, similar to those of San Francisco at the same time.

In the Valley of Petaluma these winds also prevail, reaching the lower part of the valley about four o'clock in the afternoon. In the Valley of Russian River I find a more westerly wind prevailing, which enters that section through the cañon of that stream. Thus, it is evident that plains of this section, and situated in the depression of these mountains, must always be subjected to the influences of these breezes in almost every part of them.

Our present knowledge relating to the peculiar causes inducing the rust in wheat, leads us to the conclusion that the crop on these plains must (from the above circumstances, and the relative position of the valley,) attach to itself that degree of uncertainty in its ultimate product as to render its introduction a hazardous enterprise.

Thus far, barley and root crops have succeeded without injury, and so far as quantity in product is concerned, have netted a large return; and it is to this variety of cropping, that I consider the district better adapted than to any other. Were these deficiencies in the soil, they could easily be remedied by artificial means, but where climatic influences are the causes of discrepant and unremunerative results, it is beyond the power of man to control them. As a grazing country, this entire section has no superior on this coast, and its advantages in this particular have not been overlooked by many residing here. In fact, this entire range of valleys and hills, from the shore line to the western edge of the Sacramento Valley, is the great dairy of California. Some idea of this may be gained from the fact, that upwards of fifty tons of butter alone was shipped from the town of Petaluma during 1855, and a much larger amount of cheese from the same locality—all of which is used in the market of San Francisco.

The advantages of this country for dairy purposes consists in the fact, that from the coast line, eastward, the amount of moisture absorbed from the ocean fogs as they pass over the grounds, is sufficient to keep plants and grasses, (of which there is abundance,) in a fresh and green state, during the greater portion of the summer months; while the interior, during the same periods, are parched and dried up almost entirely.

I would take this opportunity of suggesting to the people of this section of the State, the culture of the honey bee. It is the only portion with which I am acquainted that holds out the slightest hope that that insect can be reared with advantage and profit; for, it is only on the shore districts of this country that flowers are abundant during the summer season.

Thus far the production of honey, by the *natural* process of manufacture, has failed in this State, but this portion of it certainly offers the strongest inducements to attempt the production of this article as a source of profit. I think that the bee might be sustained for forty miles along this coast line.

PLAIN, WEST OF THE SACRAMENTO RIVER.

After leaving the Sonoma and Napa Districts on an easterly line of travel, you enter immediately on the southern end of the Sacramento Valley, west of the river. The Bacca Plain may properly be considered the commencement of the valley at this point.

The soil along this line of country northward, to the County of Colusi, differs somewhat from that of the coast valleys preceding. They are made up for the most part of the debris of the trappean and other primitive rocks, which as a general rule, present but few traces of the serpentine rocks or its derivatives. Syenites and green stone, the equivalents of the eastern mountain range, are found here.

The grounds are soft and mellow, easily tilled, and highly productive in character. It is evident, however, that a continued succession of the wheat crop alone in these lands, must in a few years render them unprofitable for this culture, for the reason that the materials from which the soils have been derived do not contain those elements in sufficient amount to insure with certainty a long series of cropping with this grain. The calcareous and phosphatic minerals are limited in quantity, which, as every informed farmer must know, will sooner or later seriously impoverish those lands, unless attended to early, and their grounds kept in condition, either by artificial application of the materials thus annually exhausted, or an intermission of the barley and oats, which will enable them to recover by a natural, and perhaps more profitable process.

These remarks will apply to the entire range of country included between Puta Creek on the south, and Stony Creek on the north. It would be well for agriculturalists in this part of the State, (those at least who are permanently located there,) to consider this subject well, as a heavy interest, in a pecuniary point of view, attaches itself to this matter.

This part of the State (and also that on the east side of the river, included within the same parallels,) must become the *main wheat producing districts of California.* Other portions of the valley sections, though in many instances possessing a soil of superior fertility, cannot be relied upon with certainty for the production of this crop, although those districts will produce both wheat and barley beyond any question whatever. The reason of this is obvious, and it needs but a glance at the geographical positions of each to readily perceive why this is so. The relative position of the coast valleys and plains to the ocean, is such that the moist winds of the latter, with the chilling coldness that usually attend them must, and will, exert a pernicious influence on the wheat in any portion of them.

The experience of rigid investigation for many years past in other countries, lead us to the above conclusions, and we should certainly profit by what that practical experience has demonstrated.

Had we a series of meteorological observations instituted along our valley sections, situated in the Coast Mountains, and upon our great interior plains, we should not be left to fall back upon so many of those vague surmises that at the present time forms not only the basis of opinion, but of subsequent action also, relating to the constant discrepancies that arise touching the matter of agriculture in all its varied departments. But so long as the present system exists, we must expect to suffer from what we now look upon as *unaccountable results,* when the loss of a crop (save in some half a dozen counties,) is found to occur. When these crops are successful, ample reasons are found to account for the fact why they are so, the fertility of the soil is made to shoulder and support the weighty fabric, as though no other agent had even the shadow of an existence in such

results. But the succeeding year this same crop is a total loss, and thousands of our laboring farmers are bankrupted as the consequence. What, then, is the reply? An hundred wild vagaries are put forth to shelter presumptuous ignorance, which finally falls back on the principles adopted by a coroner's jury, where the causes of death are not distinctly apparent, viz: "death by dispensation of Providence," "died by a visitation of God."

This reminds us of the reply of an ancient philosopher, touching an important question in hydraulics, "Nature abhors a vacuum beyond thirty-two feet;" and we may safely infer that the *fertility* of our soils in such cases "abhors" the production of the crop, although the evidences of *inexhaustibility* in the soils are never more apparent than when that crop is successful.

This is our present condition relating to this matter, and the usual number of causes assigned for such discrepancies are equaled only by the groundless premises on which they are based. As this subject touches a vital interest in this State's welfare, it should merit that attention which its importance demands, and measures taken to develop the facts which have a bearing upon this subject, leaving the fancies that have hitherto attached themselves to this subject, to their own support.

To avail ourselves of such means of demonstrative evidences, should be one of our first motives of action, for in this subject the whole people have a direct interest, it being a matter that affects each person pecuniarily, and the State in the same manner, but to a more extended degree. To accomplish this result, a series of meteorological observations should be instituted, that would extend from Siskiyou to San Diego. Sixteen stations, at as many different parts of the State, would not be too small a number, which could be thoroughly equipped with all necessary instruments for about $1,800. The result of such observations would place us in possession of facts, whereby legitimate deductions could be made as to the influences that climatic changes and conditions exert on the different varieties of crops that our lands are capable of producing, and which have been made so wofully manifest during 1855.

These are the only means by which this matter can be demonstrated, and until adopted, and systematically carried out, the uncertainty and doubt that now invest this subject must continue, the State, and private citizens being subjected to losses, in the failure of certain kinds of grains, without a hint even of the *medicate* causes producing the sad effects that it has been our lot to witness within the past year.

SAN BERNARDINO.

During the months of October and November, the country intermediate between Los Angeles and San Bernardino was partially examined. This district is made up of an elevated plain, ranging from two hundred to nine hundred feet above the sea, the ascent from Los Angeles to the highest part of the plain being gradual and uniform. The north side of the plain is flanked by high and rugged mountains, the mean trend of which is nearly east and west, and belong to the San Bernardino range. It is this same range that at Santa Barbara, and for a considerable distance eastward, has found a place on local maps, bearing the name of Sierra Madre, which is very inappropriate, and only serves to produce confusion. The range should bear the name of one of the principal mountains, San Jacinto, or San Bernardino; the latter would be preferable, as it is most prominent, and better known. As it is a distinct range, and of considerable length, probably not less than two hundred miles, or even more than this, and running in a direction almost transverse to every other mountain chain, either in this State or the adjoining province of Sonora, a name that would sep-

arate it from the chain, bearing the appellation of Sierra Madre, in the latter province, should be adopted, for it is only by knowing the positions of our mountains that the geography of the State can ever be clearly defined.

On the south side the plain is skirted by a range of high hills and low mountains, derived apparently from the high mountain near the coast, and on the east side of the Bay of San Pedro, known as the Santa Anna, deriving its name from the river which flows and discharges its waters into the sea at its base.

The country after leaving the Monte, which is ten miles east of Los Angeles, gradually attains elevation for sixty miles, at the rate of about twelve feet per mile, and terminates near the western edge of the valley, on which the town of San Bernardino is built. From here the ground descends for several miles, forming the beautiful valley bearing the latter name.

For the distance of about twenty miles of the route, the country is almost a perfect desert, producing but a scanty vegetation, consisting of almost leafless shrubs, with a few scattered species of the low palm tribe, and cactus.

After crossing this desert, you enter one of the most beautiful valleys in the State, surrounded on every side by water, and a stream of considerable size, (the Santa Anna,) coursing its eastern and southern border. This valley contains about twelve leagues of land, and is situated about twenty miles west of the mountain. Similar in climate to the plains of Los Angeles, it is capable of producing the fruits and flowers of either the temperate or tropical zones. Indigo, coffee and tobacco, will flourish here, and either, as a crop, would prove more remunerative than those now raised in this or any other portion of the State. The introduction of either, or all of these staples of trade and commerce, in this locality in particular, is a subject that should command the attention of our citizens residing there.

The production of wheat in this valley, must, for the reasons given in preceding pages, prove too doubtful a crop to be relied upon as a source of revenue entirely, for the blasting effects of the sea winds reach this place with ease. The character of the immediate and distant country that surrounds this section, must, so long as they exist in their present form, induce a frequent re-enactment of the disastrous results to that crop, which befel alike them and their more northern and western neighbors the past year.

The soil is possessed of almost unlimited capacities, and a fine climate exists. This may be aptly illustrated by a statement of the fact, that after the blight of the cereal crop in 1855, the grounds were re-plowed, and planted to maize, which was nearly ready for harvest in the month of October of the same year. This district, like the primitive sections of the Sierra Nevada, produces gold in its rocks and streams, sufficient in quantity to warrant mining explorations to a considerable extent. But with me it would be a matter of doubtful policy, to abandon the more certain results of agricultural pursuits, with the advantages that soil and climate here present for the production of those staples of trade, which as a State we now so heavily import, for the more uncertain, but at times the more ready product of the mine and placer. When all other means fail, they have the material about them that will furnish all the necessaries of life that are purchasable for a long period of time.

The streams that produce gold in this part of the State, are those of the San Gabriel, Arroya del Cabon, the Santa Anna and its mountain tributaries, with the valley at the base of San Bernardino, known as Valle del Oso, (Bear Valley). The metal is in coarse, thick scales, and small, pin-head grains, usually but little waterworn, and often quite rough. Between the mountains and Temescal, and also in the direction of San Jacinto, in the entrance of the Pass of San Gorgonio, an iron-shot auriferous quartz is found.

I regard this deposit of gold, and that of the northern slope of the San Ber-

nardino Mountains, as but the terminal portion of an auriferous belt, extending nearly two hundred miles northward, and is again met with at the Armagosa Mountains, a short distance from the immigrant road leading from Salt Lake to San Bernardino.

GEOLOGY OF TABLE MOUNTAIN, TUOLUMNE COUNTY.

This celebrated locality, of which so much has been said and written of late, is one of the most remarkable and interesting places to be found in this State.

That portion of the mountain which has so recently attracted attention on account of the placer deposits found beneath its surface, is situated near the towns of Sonora and Columbia, being about equi-distant from either locality. A portion of Shaw's Flat is situated immediately at its base. The superior portion of the mountain is composed of basaltic rock having the prismatic form; but in a few instances, at different points, it assumes the pentagonal shape, so common to the columnar form of this rock.

I have traced this basaltic overflow in an east and west direction, for the distance of nearly forty miles on its course, and it is probable that it will be found to extend to a much greater distance eastward than at present known.

As yet the origin of this volcanic outbreak is somewhat obscure, as no decided volcanic vent is yet known to the east of this range, though such has been reported; nor is it necessary that a crater should exist to produce the features that are throughout its extent observable.

From all the evidence existing on the subject and in our possession at the present time, it appears most probable that this immense mass of igneous material found its way to the surface through a large fissure produced from subterranean forces, and is in itself *purely local.*

The vertical position of the columns prove, that for twenty miles of its course at least, it must have flowed in a horizontal direction, and at the western end of the bed, where it approached the plains and began to thin out, there we find it following the accepted rule as regards the crystallographic forms assumed by this rock. Although it is prismatic it loses to a certain extent its verticality, (as may be seen at Peppermint Falls,) and the columns are inclined to various degrees of the horizon.

Its super-position is another proof of its horizontal movement, as well as its comparatively modern age. The rocks over which it flowed on the south side of the mountain are primitive in character, being composed of mica schist and others of the granitic series, the former at the points of contact having suffered in texture and compactness from the heated mass.

Its breadth is very variable throughout its course, in no instance, I believe, less than four hundred feet and often to one-fourth of a mile. It seems to have followed the course of a stream, filling its bed and banks, and to have flowed in this course for the entire length that it is now observable upon the surface.

To the east of Columbia it crosses the present bed of the Stanislaus at two different places, but what its position beyond this may be is at present unknown with any degree of certainty. From the relative position of the Stanislaus at the present time the evidences are almost demonstrative, that at the period of its occurrence it flowed into and down the former bed of this river, displacing the latter and filling up the space between its banks. The depth of the banks to the bed may be pretty accurately measured by the thickness of the basalt above that bed, which is about one hundred feet on a general average.

Subsequent to the deposition of these rocks the *drift-banks* of the stream have been gradually removed, which has left the basalt in relief above them. A

portion of the ancient banks still remain on the south side of the mountain for about one mile in length, and this is found to rest on the same micaceous schist that is found at various points, as before mentioned. The *drift* is composed of the debris of *primitive* rocks alone.

Within the outcropping mica schist on the flanks of the mountain and beneath the basaltic mass, is found a very modern aqueous deposit, consisting of clay, sands, fine and coarse gravels, similar in all respects to present river beds. Among these are found the shells of alosmodon and a few small univalves, the casts of which closely resemble some forms of physa—present inhabitants of the adjoining streams. Of the former shell I am unable to distinguish it from alasmodon yubaensis, a shell found in all our streams throughout the State at the present time.

The fine clays contain an abundance of leaves of present existing genera and species, most of them may be found in the adjacent country distributed along the banks of the streams and in the deep ravines adjoining.

The "*bed rock*" is primitive, like the present bank of the Stanislaus to the north, being composed of mica schist and the older trappean group. Time is yet required to determine with certainty the period to which this basaltic overflow belongs, but from present appearances it seems improbable that it should extend beyond the pliocene.

The examination of the fossils, made by Messrs. Evans, Shumard and Newberg, about the Dalles, and other parts of Oregon and Washington Territories, may throw some light upon this subject, as these gentlemen have observed the overflow of basalt in those regions over the modern aqueous deposits to an extent that would make "Table Mountain" a mere secondary affair.

The gravel and clay beds of this locality have been found to prove extremely rich in placer gold, but like all new discoveries of this kind, much that has been said is only conjectural.

There is good reason to believe that the range will furnish a large amount of gold, from one extremity to the other, as it flows over a deposit which has been derived from the primitive rocks exclusively, from which the greater portion of the placer gold of this State has been set free.

Another reason that confirms this opinion is found in the fact, that the drift deposits which lie beyond the western terminus of the Table Mountain, and inferior to the same, are well charged with gold. They are likewise co-extensive in an easterly direction with the mountain, so far as that limit is at present known.

This being the case it will require no dangerous tension of the mind to believe that for many years hence, this district will yield ample rewards for labor, though in a minor degree to what either anticipation or report would make it.

This mountain has been often blended with the table lands that skirt the base of the Sierra Nevada in many places. There is but one locality with which I am acquainted, that bears any resemblance to it, and that is in the vicinity of Pose Creek on the Upper Tulare. The relationship here existing is found in the character and age of the material, but not in the forms that it assumes; for in the latter case the overflowed matter is mostly scoriaceous and massive, and not prismatic.

The table lands (called *Table Mountains* since the opening of the locality at Sonora) of other parts of the State are the remains of the ancient shores of the ocean, and are of marine origin exclusively, having their origin from aqueous causes alone, not from igneous. The peculiarities of form seen from a distance, has been the cause of confounding them together.

Beneath the basaltic rocks of the Table Mountain, and below the fresh water deposits that immediately succeed the latter, are found a series of marine tertiary rock, composed of sand-stone, conglomerate and slates regularly stratified, and

having a westerly dip of eight or ten degrees. These aqueous rocks can be studied to the best advantage about two miles east of Dentville, on the Stanislaus River. At the locality known as "Two Mile Bar" these rocks are cut through by the river, exposing their surface and those of the basaltic columns above them, to the hight of more than two hundred feet above the primitive rocks on which they rest, and which are exposed for a hight above the surface of the stream for about sixty feet more.

The scenery at this place is romantic in the extreme, but not more so perhaps than at other points further up.

Above all the aqueous rocks the basalt appears in the columnar form, at places standing vertical, and again the columns lying horizontal resting upon the vertical masses. The mural walls of the aqueous rocks with the above, and their hight above the river, give to the district a wild, rugged, and at the same time, a fanciful aspect. About three miles above Dentville an adit was driven into the aqueous rocks, by Judge Stakes and others associated with him, in which several marine shells were met with. This work is still going on, and during the coming season will test most fully the character of these rocks.

Gold was met with in the course of the works, but not in sufficient amount to justify them in stopping at this point for its extraction.

This is but another instance corroborative of my former statements, of the existence of this metal in the marine sand-stones and conglomerates that skirt almost the entire line of the base of the Sierra Nevada, and is but an analogue of the present existing state of things along our coast line, from Oregon southward. We need no better evidence of this than the beach washings along that line at the present period.

CARBONIFEROUS ROCKS OF THE NORTHERN DISTRICTS.

In my report of last year, attention was called to the existence of a group of rocks belonging to the coal measures. The line of country traveled over in this part of the State, has developed their existence as far north as the Shasta and Yreka Valleys, and westward of the points at which they were noticed last year, as far as the head of the Cottonwood. Those groups of the above district are much superior in position to those observed in 1854, and contain a series of fossils of higher organization. They are consequently further removed from the coal beds than those rocks situated between the Pitt River and Cow Creek, east of the Sacramento. On the Cottonwood, small seams of a highly bituminous coal is frequently met with, but as yet no vein of sufficient power to warrant mining operations for this mineral.

In the district east of the river two additional veins have been found, neither of which have yet been opened to any considerable extent. Within the ensuing year this section will be more thoroughly explored for this mineral, as its extension southward from Cow Creek we are now pretty certain is not less than thirty miles.

SALINES OF THE UPPER SACRAMENTO VALLEY.

Among the table lands of this part of the State, are found an extensive group of sedimentary rocks belonging to the lower Eocene period, abundant in marine fossil remains. In the vicinity of Antelope Creek, extensive saline deposits are met with, which, if properly worked, will furnish large supplies of salt for commercial purposes. Associated with the latter mineral in solution, and as an efflorescence on the rocks and earth, is found the tincal, which, when purified, forms

the borax of commerce, so much used in all metallurgical operations as a flux for the purification and smelting of metals and metallic ores. The capacity of this district for the production of this mineral alone, is equal to eight hundred tuns per annum.

Considering the very few localities which furnish this useful agent in sufficient quantities to make it an object for commercial purposes, this locality, in this State, assumes an important position, and adds another to the many of our valuable resources. The day is not far distant when this mineral will be found to form an extensive article of export to foreign markets, and to compete with the produce of Tuscany, China and Thibet, at present the three main sources of supply for the world. It is found here in the form of bi-borate of soda, boracic acid, borate of lime, and of magnesia. In addition to this, iodine and bromine occur at the same locality.

The springs which furnish these materials are abundant, and thus far have proved highly efficacious as medicated waters, a great variety being found in the immediate vicinity. Sulphurated hydrogen gas is found in some of these springs, forming an active medicinal agent, in the form of sulphur springs, a few of which are thermal.

From all the springs heavy volumes of carbureted hydrogen is evolved, which burns freely, and with a clear flame. This latter is furnished in sufficient quantity to serve the purpose of evaporating the waters, for the manufacture of salt and borax.

The elimination of this inflammable gas in such large quantities, and the occurrence of the coal-bearing rocks and occasional seams of coal a few miles to the north is, to say the least, a strong inducement to believe that a bed of bituminous coal underlies this entire section of the State. The evidences are sufficiently strong to warrant an exploration to determine this point by boring. It is not probable that a depth to exceed three hundred and fifty feet would be necessary to determine the fact.

MAMMOTH MINE SEVENTY-SIX, JAMISON CREEK.

This mine is situated on Jamison Creek, in the County of Plumas. It was located and opened in 1851. The lode is heavy, and belongs to the primitive ranges, situated near the eastern line of the State, and near the main ridge of the Sierra Nevada.

It is beyond doubt but a continuation of that line of lodes on which the Ariel Mine is located in the County of Sierra, eighteen miles southward of Downieville, on the south branch of the North Yuba, and also that of the National Mine, on the ridge of South Fork of the Yuba, in the County of Nevada, the Copper Hill and German Bar Mines lying intermediate, and between the Middle Yuba and Downieville.

In 1852 the company commenced work with a set of arastras, and have continued with the same until the present year. During 1855 they have erected a Chili Mill at an expense of $18,000, employing water as a motive, with a capacity equal to thirty horse power. The expense of opening the mine, with the improvements prior to 1855, amounts in the aggregate to a little less than $10,000, making the cash capital invested equal to $28,000 at the present time.

The present condition of the mine is as follows: A main shaft has been driven near the center of the lode, to the depth of seventy feet, and ten feet in diameter, occupying the power of the lode only; an adit two hundred and sixty feet in length cutting the vein thirty feet below the bottom of the main shaft, (the adit is five feet by six feet,) which will deliver the ores from the mine with greater

facility and quantity, than by the course heretofore pursued, and with a great saving of expense.

An adit is to be connected with the reduction works by a train road. The adit has been driven through the trap rock for a distance exceeding one hundred and forty feet, at an expense of thirty dollars per foot.

On these large lodes, wherever they have been opened, we find the same general rule holding good that have been repeated previously, viz: that a very general increase in power is manifest the greater the depth attained.

In this mine the increase is eighteen inches in twelve fathoms, the vein at this depth being twelve feet in power.

The Chili Mill reduces two and one-half tons per diem, the ore yielding thus far an average of forty dollars per ton.

It will be seen from the above statement that this mine, as imperfectly worked as it appears to have been by the slow process of the arastra, together with the absolute amount of ore reduced, which amounts to seven hundred tons only, has paid the entire outlay of capital in its opening, and to the present time the yield being $28,000 with the contingent and incidental expenses.

RECAPITULATION.

Mine opened, 1851; erection of new reduction works, 1855; expense incurred for same, $18,000.

Tuns of ore reduced per day, two and a half; average value of same, forty dollars.

Depth of main shaft, seventy feet; length of adit, two hundred and sixty feet.

Cost of adit, $5,320; cost of shaft, $1,260.

Strike of lode, N. 30° E.; dip 40° W.; power, twelve feet.

Walls of lode, talcose schist; ores, pyriferous and gossan.

McGHEE, Director.

EXPERIMENTAL MINE, COLUMBIA, TUOLUMNE COUNTY.

This mine is situated about one and a half miles north of the town of Columbia, in the County of Tuolumne.

It was first located in 1852, and some little money and labor expended upon it sufficient to fairly test the character of the vein.

From this time until the early part of 1854, little or no labor was bestowed in developing the mine. During that year a company was organized with a small capital, who proceeded to erect a mill and reduction works, driven by water, and continued in operation until the failure of a sufficient supply of the motive power compelled them to suspend their operations for the time being.

The capital invested in erecting their reduction works amounted to $3,602; and at the end of a little more than four months, the mine yielded $16,150 from fifteen hundred tons of ore, giving an average of a little more than ten dollars per ton.

This, however, is but a preliminary movement to a larger operation, as the aggregate yield was found to pay a large interest on the capital invested.

SPRING HILL MINE, AMADOR, AMADOR COUNTY.

Cash capital $18,000.

The Spring Hill Mine is situated on Amador Creek, about three-fourths of a mile from the town, to the westward.

The lode comprising this mine was located in 1851, by Rice & Co., who commenced operations on the vein in 1852.

It is from this year that the mine must take the date of its existence, for during that period the first mining improvements were instituted.

From 1852 to the beginning of 1855, the lode was worked with variable success by the original owners. This was attributable to the loose manner in which the mechanical and engineering departments were conducted, and the lack of application of those means that were available and most effective during that period. Mechanical skill and a sad want of knowledge of the requirements of mining engineering marked its progress for three years, at the end of which time the mine was in a condition little better than valueless, and the motive power nearly on a par with the subterranean workings. The whole appearance of the property was that of a "*present*" interest only, and each department of its conduction was but a reflection of the same image, too frequent still, even at this time.

The result of the above operation was the disposition of the property at a mere song, a moiety of its true value, which took place in the latter part of 1854.

At this period a new company came in possession of the entire property by purchase, and commenced the first improvements that partook of the character of permanency in the slightest degree. Their first movement was to place the mine in something like a safe working condition, which required a heavy outlay of capital in addition to the purchase, they being obliged to repair the defects of the workings of previous years. This done, they then commenced the extraction of such ores only as could be removed without subsequent injury resulting to the mine, and secured their excavations, as they proceeded, in a permanent manner. In the course of these workings, from their directions and the relative position of the older excavations, it became necessary to cut the latter, in order that easy and efficient communication might be had with the reduction works, for the transportation of the material of the lode; and in pursuing this course it was not unfrequently that the old works, as they approached them, would give way, from the total insufficiency of the artificial supports that were placed in them.

Thus, after encountering obstacles of the above character, the company have succeeded in not only placing the mine in a safe and accessible condition, but have also taken from the lode an amount of ore sufficient to meet their outlay in repairs and other improvements, and a handsome profit on the capital investment.

Since its occupancy by the present company a new building has been erected over the mill and wheel, and another for the accommodation of their men employed, which is twenty-six by fifty-two feet, at an aggregate expense of $3,500. The dead work consists in driving their upper adit one hundred and fifty feet, at an expense of six dollars per foot, and the sinking of the eleven-fathom shaft at its termination, at an expense of five dollars per foot, which in their aggregates amount to $1,230 more.

The improvements on the mine for 1856, and which are in course of construction by contract, are one adit of ninety feet, at seven dollars per foot. This adit begins at the north shaft of the old workings and runs diagonally into the hill, and when on the vein will afford a line of level about five hundred feet in length. A new sixty-horse-power engine is in process of erection to replace the dilapidated machinery now in use, and a heavy Chili mill in connection with the former, the whole of which will be driven by a sixty-horse-power.

Statistics for 1855.

Number of men employed, 11.

Five miners at $60 per month	$300
One Stoker	50
One Whim-tender	50
Two Battery-tenders at $60 per month	120
Two Engineers at $65 per month	130
One hundred and forty-four cords of Fuel at $5 per cord	720
Provisions	240
Incidentals	240
	$1,850

Average amount of ore reduced per month, 246 tuns; aggregate for nine months, 2,221 tuns; average value per tun, $21; aggregate receipts, $46,000.

Aggregate deads and improvements	$4,730
Average monthly expenses	1,850
Aggregate of expenses	16,650
Total expenses	$23,230
Net balance over all expenses	$22,770

CONDITION OF THE MINE.

	Fathoms.
One Whim Shaft	19
One Air Shaft	19
One Air Shaft	11
Total Shafting	49

	Feet.
Lower Level at bottom of Whim Shaft	130
One Adit	274
One Adit	30
Total Levels and Adits	434

Strike, north and south; dip, 68° east; power, nine feet. Ores, pyritous.

PACIFIC MINE, PLACERVILLE, EL DORADO COUNTY.

The ground occupied by the mine of this company was located in 1852, and like many others of that period, had an existence only in the highly elated hopes of those who found the lode. Until 1854 the ground remained unimproved, when the present stockholders, becoming convinced of the value of the lode, commenced operations by opening the vein through shafts and adits, and subsequently by the erection of reduction works during the summer of the year.

The mine was continued in active operation from that time up to the present without intermission, during the period in which water was obtainable, which is

their motive power. The absolute running time for the year (ending November, 1855) was nine months and twenty days.

The cash capital invested in the beginning of operations in 1854, was $11,000, about $7,000 of which was expended in the erection of their mill, and the balance in opening the lode and the construction of conveniences to convey their ores to the reduction works.

The amount of work done upon the lode within the year, will perhaps convey a better idea of the activity with which the work has been prosecuted than any other means that could be adopted.

The lode has been opened and is in good workable condition for more than two hundred feet and at an average depth of nearly sixteen fathoms for the above length below the surface. Near the center of the lode one thirteen-fathom shaft has been sunk and is used at the present for bringing the ores from the upper galleries to the surface.

From the west side of the hill an adit has been driven to intersect the lode on a line with the main shaft, and which cuts the lode at twenty fathoms from the surface.

From the entrance of the adit to the reduction works a train road has been carried on the side of the hill, about five hundred feet in length, which is now used for the delivery of all the ores of the mine; this has been constructed during the past year at an outlay of $4,500.

During the month of December the company were engaged in erecting more effective machinery for the purpose of amalgamation, at an expense of about $3,500. This is a judicious movement, as it is most evident that a serious loss of metal has been sustained during the past year's operations.

At the end of the year, terminating the 29th September, 1855, the company had declared six dividends, above all current and incidental expenses, and above original capital investment during the following months. The dividends are on forty-five shares:

	Per share.	Net receipts.
March 31st	$25 00	$1,125 00
May 26th	60 00	2,700 00
June 30th	100 00	4,500 00
July 28th	20 00	900 00
August 25th	40 00	1,800 00
Sept. 29th	25 00	1,125 00

The following is the statement of operations at this mine for the past year and its present condition.

RECAPITULATION.

	Tuns.
Amount of ore reduced per month	164
Aggregate for nine months	1,524
Average value per tun	$25 00
Aggregate yield for 1,524 tuns	39,778 61
Current monthly expenses	1,650 00
Aggregate of monthly expenses	14,850 00
Net profits	24,928 61

	Fathoms.
Length of lower level	34
Upper gallery, north	8
" " south	16
Main shaft	16
Main adit	31

Strike, north and south; dip, 58° east; power, 9 feet; dead work, $4,500.

CHARACTERISTICS OF THE LODE.

The lode is situated in talcose slate, the superior portions of both being much decomposed and easily removed. A large amount of the upper portions of the vein contains cavities holding free gold. At the depth of about forty feet the vein becomes more compact and pyritous, having a slight ribbond appearance, from a small quantity of gruphite being distributed through the seams. The rock is thoroughly impregnated with thin, glistening scales of greenish and whitish talc, the latter often covering the surfaces of fractures entirely, and the latter containing microscopic particles of gold in considerable quantities; at times the surfaces are well filled with fine spangles of gold visible to the naked eye.

This lode contains lead and molybdenum in small quantities, in the form of sulphurets, at times distinct but most commonly combined in the same mineral. Among the ferruginous sulphurets a small quantity of arsenic is noticeable, but to no considerable extent.

This mine is situated in the corporate limits of the City of Placerville, and immediately south of the center of the corporation.

EUREKA MINES, SUTTER, AMADOR COUNTY.

Cash capital invested, $32,000. The location of this mine was made in the early part of 1852, since which time it has been actively worked up to the present date. Among the early adventures in gold mining proper, the persons who compose this company were among the first who entered the field of research to develop and demonstrate the feasibility and practicability of this branch of industry in this State.

Their first operations were cotemporaneous with the few who launched on this tide of speculation in the County of Nevada, and with others in the Counties of Amador (Calaveras) and Mariposa.

The difficulties encountered by these parties at the outset were such as to dishearten most of mankind, but a cool determination and prudence in the management of their affairs has enabled them ultimately to overcome the multitudinous obstacles that opposed their way, and ride out safely the wild tornado of public opinion that made its inception against them during the latter part of 1852 and the beginning of 1853.

From the early part of the latter year the company progressed steadily in their operations, and in the latter part of that year the following was the condition of their mine:

Near the center of the lode which forms their property, they had sunk one shaft to the depth of seven fathoms; at the bottom of this shaft a level was carried south one hundred and forty-three feet, and north ninety-five feet, making two hundred and thirty-eight feet of levels at the close of that year.

During this year a heavy and long adit was commenced on the east side of the

hill, which was driven through solid rock three hundred and seventy feet, and at an expense of eighteen dollars per foot.

During the year 1854 the main shaft was carried to the depth of sixteen fathoms, and an adit of one hundred feet driven on the west side of the hill, which intersects the main shaft at the depth of seven fathoms, and the upper galleries at the same point. The upper galleries were driven one hundred and fourteen feet further south and seventy-five feet north.

At the bottom of the sixteen-fathom shaft levels were driven north sixty feet and south eighty-five feet, making one hundred and forty-five feet of levels, fifty-four feet shafts and one hundred feet adits, on the lode and west side of the hill during that year; the train-track and adit on the east of the vein having been completed to the length of nine hundred feet during the same period.

At the close of the year ending December 1, 1855, the main shaft had been sunk four fathoms, and a level driven south ninety-four feet and another north to the depth of thirty feet, and the long adit driven to the depth of five hundred and thirty-five feet below the surface; at this depth the vein carries a power of twelve feet.

Prior to 1855 a portion of the lode only had been taken out, from the meager character it presented—seven or eight feet being the maximum of the strength of the lode used for mill-work. But since the commencement of 1855 that position of the vein formerly rejected has, at the depth of one hundred and thirty-two feet, assumed sufficient value to warrant its extraction, and the result is, an increase of one-third more ore in the same depth opened.

The ores now taken from the mine are one hundred and twelve feet below the water line.

During the months of January and February the Directors declared three dividends of one hundred dollars per share. The mine is free from debt.

The limited capacity of the reduction works, and the increase in the power of the lode, bears little relation to each other; and the company, in place of stopping their present battery to erect one of greater power, purchased during the past year an adjoining mill, with its water privileges, of nearly equal capacity to their own, at an outlay of $6,000, and with an additional expense of $1,500, have put the same in operation, thereby doubling their former capacity for reduction. Expenses in repairs on the reduction works for 1855, $1,200.

The scarcity of water in the creek from whence their power is derived, during the past year, has been such that but six months full running has been made, during which the average amount of ore reduced was fifty tuns per week. During the dry season the average of reduction amounted to twenty tuns for the same period of time.

The following statement will give the comparative expenses in conducting the operations of this mine for 1854 and 1855:

Statistics for 1854.

Cash capital, $32,000.

4 Miners	$400
2 Stokers	120
2 Battery Tenders	150
1 Carpenter	100
1 Blacksmith	100
1 Horse Team	216
1 Ox Team	192
Provisions, etc	900
Incidentals	80
	$2,258

Dead work on shaft and equipments, 54 feet, at $20 per foot	$1,080
Adit and train, 370 feet, at $18 per foot	4,660
West Adit, 100 feet, at $8	800
Aggregate monthly expenses for nine months	20,322
Aggregate receipts per month, for nine months, at $4,000 per month	$36,000
Expenses	26,862
Balance	$9,138

Statistics for 1855.

4 Miners	$280	
2 Stokers	120	
2 Battery Tenders	150	
1 Carpenter	75	
1 Blacksmith	75	
1 Horse Team	216	
1 Ox Team	192	
Provisions, etc	600	
Incidentals	60	
	$1,768	
Dead work on adit, 165 feet, at $7 per foot		$1,155
Expenditures on Mine and Mill		13,298
Total ore reduced for 6 months, 1,296 tuns; do. do. for 6 months, 396 tuns		
Aggregate Expenses		14,496
Total receipts		33,000
Total expenses		28,949
Balance		$4,051
Balance to credit on purchase New Mill		6,000

The greater proportion of the latter has been expended in improvements and liquidating liabilities.

The balance for 1855 is over and above all expenses and dividends for the year, a very material decrease in the expenses of conducting the operations of the mine from that of 1854, which is a general rule throughout the State.

The following recapitulation will show the condition of the subterranean works on the lode:

RECAPITULATION.

	Fathoms.
Depth Main Shaft	22

	Feet.
Length Upper Level	230
" Middle "	145
" Lower "	124
Total length of Levels	499

	Feet.
West Adit	100
East "	535
Train Track	430
Total length of Adit Tracks	1,065

Power of Lode, 12 feet; dip of Lode, 70° east. Strike, north and south. Aggregate amount of ore reduced, 1855, 1,692 tons. Average value, $20.

KEYSTONE MINE, AMADOR, AMADOR COUNTY.

This mine, like that of the Eureka, was one of the pioneer operations of the State. The mine and reduction works are situated but a short distance west of the town of Amador, on a small tributary of Amador Creek.

The first permanent workings of this mine were commenced in the early part of 1853, and though superficial in their character, were prosecuted with vigor for a considerable part of that year. At the close of 1853, and in the early part of the following year, the old workings were abandoned, from the insecurity of the artificial supports used during the preceding period.

It was at this time that the necessity of more permanent supports for the excavations became apparent to the conductors of the mine, and during that year they commenced their permanent structures in the underground operations, their first movement being the cutting of a main shaft of sufficient capacity to afford easy ingress and egress from the main adit to the lode below its level. During 1854 this shaft was driven to the depth of eight fathoms on the vein, and conforming to its dip, and from the top to the bottom was timbered heavily with oak, and the angles snugly tenoned and jointed, the ceiling being put in with heavy planking, and closely squared. By this tedious and expensive process the mine was safely secured from falling in, the upper part of it at least, a result which must have ensued had the old system of working been persisted in. The old works above the main adit were still in a weak condition, and began to present many features of falling in, and which would have produced serious inconvenience had they neglected to secure it in a proper manner.

An inclined shaft was accordingly commenced that would connect that sunk from the end of the adit with the surface, in a direct line of inclination. This was done during 1855, and the depth of that portion of the shaft above the adit was seven fathoms.

This whim-shaft was cased with solid timber from top to bottom, and put in with close joints, as it became necessary to use this heavy material in place of planking, from the loose character of the surrounding ground. The ores are now raised by a horse whim, through the line of shafting as described, and landed at the end of the main adit, from whence they are conveyed on train-ways to the reduction works, about four hundred feet north of the entrance to the mine.

During 1855 the sinking on the lode in a line with the whim-shaft, has been five fathoms, and from this depth the lower level has been driven one hundred feet north, and south about twenty feet. The upper gallery has been driven each way but twenty-five feet.

The lode at the depth of twenty-one fathoms, has a power of nine feet for one hundred feet in length. The ores of this mine are highly pyritous, and strongly impregnated with graphite, the latter mineral imparting at times a black, mottled appearance to the ores, and at others a ribbond-like form, giving the idea of true lumination.

At the depth of seventeen fathoms the ores lose the character of porosity which in the superficial ores was a striking characteristic, the cavities containing free gold. The walls of the lode are of a graphic slate, often impregnated with arsenical crystals of iron, and the simple sulphuret of that metal.

During 1854 this company declared monthly dividends through the year of $200 per share. The following statement will show the condition of the mine and the relative expenses of working for 1854 and 1855:

Statistics for 1854.

Number of men employed, eighteen.	
Six Miners, per month	$390
Two Engineers	180
Two Stokers	120
Two Battery Tenders	120
One Teamster	70
One Blacksmith	70
One Carpenter	70
Provisions	416
Incidentals	288
Eighty-five cords Wood per month	425
	$2,149
Supplies, Repairs, etc	$185
Dead Work and Improvements	6,181
	$6,366
Average ore reduced per month, 192 tuns—2,204.	
Average value per tun, $21	$46,284
Aggregate monthly expenses	25,780
" deads and improvements	6,368
Total receipts	$46,284
Total expenses	32,148
Balance	$14,136

Statistics for 1855.

Number of men employed, twenty.	
Eight Miners	$420
Two Engineers	150
Four Stokers	200
Two Battery Tenders	120
One Teamster	65
One Blacksmith	65
One Carpenter	65
One Whim Tender	70
Incidentals	200
Seventy-five cords Wood, at $4 50	336
Provisions	400
	$2,091

Dead work and repairs	$1,200
Ore reduced, 3,000 tuns.	
Average value, $20 per tun	$60,000
Aggregate monthly expenses	26,282
" Deads and Improvements	1,200
Total Receipts	$60,000
Total Expenses	27,482
Balance	$32,518

During the month of March a dividend of five hundred and fifty dollars per share was declared, since which period two others have been declared, the amount of which is not ascertained.

The following recapitulation will show the amount of work performed upon the mine:

RECAPITULATION.

	Fathoms.
North Shaft	4
Main "	21
Total	25

	Feet.
Upper Gallery	190
Middle "	200
Total	390

One adit of 140 feet.

Strike, north and south; dip, east. Power, nine feet.

UNION MINE, SUTTER, AMADOR COUNTY.

The Union Mine is situated in the town of Sutter, formerly known as Amador No. 2.

This mine was located in 1852, though but little work was done upon the lode during that year or the following. In 1854, an attempt was made to reach the lode by driving an adit from the west side of the hill to the length of about three hundred and fifty feet; at this point the vein was tapped and worked with variable success, but owing to the insecure manner of supporting the walls, and a rather reckless method of working the lode, it became abandoned for the time being in order to settle up the affairs of the concern.

The work during this period was performed under lease and contract—a most disastrous course to pursue in gold mining in this country. The result of the operation was, that at the time the ninety-foot level on the south was completed, the property was in worse condition and of less value, so far as those works were concerned, than in the original state in which nature had placed it. In the latter part of 1854, the company had decided upon a systematic plan of working, and in the course of the past year have put that plan into execution.

The whole of the old works are abandoned for the present, and will not be used

for the extraction of ores until levels are driven at the bottom of the present main shaft, when by stopping a winze between the upper and lower levels, and putting the main adit in repairs, good ventilation and an easy delivery of the ores to the surface will be made.

With this view and plan before them, the company commenced their first permanent operations in the early part of 1855 by driving a six-foot shaft in the lode to the depth of twenty-seven fathoms. The shaft is heavily timbered and planked from the top to the bottom, and is separated in the center by a partition, on each side of which a pair of train rails are laid for the purpose of guiding the "ribble tubs" in which the ore is placed to be taken to the surface.

In all the mines of this portion of the State having inclined shafts, this system is now adopted. Each tub when loaded will bring up about four hundred pounds to a cargo.

At the bottom of the twenty-seven fathom shaft, two levels have been commenced, and are driven north and south about thirty-five feet; at the distance of one hundred feet north of the main shaft, another shaft has been commenced and carried to the depth of nine fathoms.

At twelve fathoms from the surface, and connecting with the whim shaft, two galleries have been driven of ninety feet each; the south gallery connects with the end of the old adit of three hundred and fifty feet, and may be used for the transportation of ores at a future day.

At the bottom of the main shaft the lode has a power of twelve feet and possesses all the characteristics heretofore mentioned of the lodes of this part of the State, being more or less pyritous and streaked with graphite derived from the investing walls of the lode.

On the east side of the lode a rare feature is noticeable for this system of veins, and one wholly anomalous in this country. The ores are uniformly of a dark color, with a tint of blue in every mine thus far opened; but the east side of the lode of the *Union* carries a vein of pure white quartz, free from sulphurets or other admixtures, but containing pure metallic gold imbedded in coarse nuggets.

The mine employs fifteen men at an average rate of seventy-five dollars per month each, with board, and up to the present period has paid the entire expenses of labor and all the incidentals pertaining to the operation for the year, from the ores extracted during the opening of the mine.

RECAPITULATIONS OF WORKINGS.

	Fathoms.
1 shaft of	27
1 "	9
Total	36

	Feet.
2 galleries, 90 feet each	180
1 adit, 1854	350

Strike, north, 50° west; dip, 70° east. Power, 12 feet.

MIDIAN MINE, HERBERTVILLE, AMADOR COUNTY.

This mine was located in 1852, under the name of Lea & Johnson, and during 1853 a small amount of work was done upon it. In 1854 it passed into the hands of the present parties, holding it by purchase. The latter part of the year was spent in exploring the mine and the extraction of ore preparatory to reduction. During the past year the company have erected their reduction works and other necessary buildings, at an expense of $10,000; the power employed being water. During the past year the lower south level has been driven ninety feet and a shaft sunk to the depth of seventeen fathoms. From the bottom of this shaft, which is used for hoisting the ore from the mine by a horse whim, a level has been driven fifty feet, and the distance between levels is sixty feet.

At this mine the sulphuret of molybdenum occurs associated with lead, and usually combined with the sulphuret of iron containing the gold.

The characters of the ores have changed materially at the depth of seventeen fathoms. From the surface down to the depth of twelve fathoms the pyritous minerals were much decomposed, and at times a considerable amount of red oxide of iron impregnated the ore. At the present time the ores comport in their dark blue color with those of the surrounding district, being highly charged with pyrites which develops gold after calcination.

The shafts and levels on the east side of the hill are not used at present on account of their distance from the reduction works, as a greater amount of mineral is obtainable from the workings in close proximity to the mill, the power of which latter is used to raise the ores from the mine, and a heavy item of expense is thus saved in teaming.

The failure of water to supply power during the past summer, prevented the reduction of ores beyond the period of four months, which constituted the entire running of the mill for 1855; but this failure will probably be obviated the coming year by the introduction of a greater amount of water from other sources.

The walls of the lode are of graphic slate on one side and an impure serpentine rock on the other; this latter is highly pyritous, and in the adjoining Herbertville Mine has proved highly auriferous. An examination of this rock will be found in the table of analysis and assay.

No statistics can be given of receipts and expenses, from the short period that the mine was reducing ore.

RECAPITULATION OF WORKINGS.

	Feet.
1 adit	60
1 level	90
1 "	50
2 levels, 1854	30
Whole amount levels and adit	230

	Fathoms.
1 shaft	8
1 "	17
Whole amount shafts	25

Strike, north and south; dip, east 70°. Power, 9 feet.

BADGER MINE, SUTTER, AMADOR COUNTY.

The Badger Mine is situated about 1,000 feet south of the Eureka, and is a continuation of the same lode. The reduction works belonging to the company are situated on the creek, half a mile west of the town.

This mine was opened in 1854. During that year an adit was driven to the length of three hundred and fifty feet, at an average cost of eight dollars per foot.

Between the latter part of that year and the month of December, 1855, a shaft was sunk to the depth of twenty-nine fathoms on the lode, at an expense of sixteen dollars per foot, including timbers and equipments for a whim. At the depth of twenty fathoms from the surface, a level has been carried north twenty feet, and south to the same distance, and at two and a half fathoms below the latter another level has been driven south of the main shaft to the same distance.

From the bottom of the twenty-ninth fathom shaft, a level has been driven south sixty feet and north fifty feet. A winze is carried from the middle level to the lower one, through the depth of five and a half fathoms from the end of the south level, and the ground intervening between the end of the middle south level is being removed in order to connect the two at the depth of sixty feet south of the main shaft.

From the latter part of 1854 up to date, the company have erected their reduction works and other necessary buildings at an expense of $12,000, and an additional expense of $2,500 in the construction of roads and kilns for the conveyance and calcination of their ores.

The character of the ores of this mine are precisely of the same character as those of the Eureka, next adjoining on the north.

The average running time of the mine during 1855, amounts to six months only, and a scanty supply of water part of the time.

The power of this lode has increased about thirty per cent. at the bottom of the shaft over the size at the anterop. The ores are heavily charged with arsenic, iron and molybdic sulphurets, in which free gold is disseminated.

The amount of assessments called on the opening of the mine and the erection of their works, was five hundred dollars per share, of five shares, and the balance of expenses for the period which they have been in operation, has been derived entirely from the proceeds in the opening of the mine.

The mine has employed during the entire year twelve men, at an average of sixty-five dollars per month and board.

The following statistics will show the general expenses incurred in getting into operation:

Cost of Mill and Equipments	$12,000
" Main Adit	2,800
" Roads and Kilns	2,500
" Teaming 1,080 tuns ore	1,080
" Shaft, Timbers and Equipments	2,820
" Fuel	192
Total general expenses	$21,392

The average amount of ore reduced per month, with full head of water, is one hundred and eighty tuns. The aggregate for the six months was 1,080 tuns, yielding $35,000, or nearly thirty-three dollars per tun.

The condition of the subterranean condition of the mine will be found from the following recapitulation:

RECAPITULATION.

	Feet.
1 Adit	350
1 Level, upper	20
1 " "	20
1 " middle	20
1 " lower	60
1 " "	50
Total Levels	170

	Fathoms.
1 Main Shaft	29
1 Winze	5½
Total Shafts	34½

Strike, north and south; dip, east 70°. Power, four feet. Working twenty-six fathoms below water line.

HERBERTVILLE MINE, SUTTER, AMADOR COUNTY.

This mine has been alluded to in former reports, and is among the earliest that were opened in this State. Its operations have continued almost uninterrupted until during the past year. During this year but a small amount of ore has been reduced, in consequence of the failure of water to supply the motive power, the company having removed their engine on the erection of their large water-wheel in the latter part of 1854.

This has proved a serious inconvenience, not only to this company but also the Midian, adjoining, both of which were dependent on the water of an adjoining canal to continue operations in reduction.

After the failure of the water the Director of the mine continued the sinking of the two whim-shafts, and the driving of the levels between them. Little, therefore, has been done other than to open the mine to a greater extent than formerly existed. This has been done at a heavy expense, and the small amount of ore reduced has nearly met the liabilities incurred.

The condition of the mine at the close of 1854 was as follows:

The south shaft had been sunk to the depth of twenty-three and a half fathoms and the north shaft to sixteen fathoms, with levels, uniting the shafts which are distant from each other, one hundred and twenty feet, and extending beyond the shafts the length of two hundred and eighty feet, inclusive.

The work this past year consists in the sinking of the south shaft to the depth of thirty-six fathoms and the north shaft to thirty fathoms. From the bottom of the thirty-six-fathom shaft, levels have been driven each way and between shafts to the length of three hundred and twenty feet, the middle gallery to the length of one hundred and eighty feet, and the upper gallery two hundred and thirty feet; distance between levels sixty feet.

At this depth the ore maintains the same features as formerly, being highly pyritous.

RECAPITULATION.

	Fathoms.
1 North Shaft	30
1 South "	36
Total Shafts	66
	Feet.
Lower Level	320
Middle "	180
Upper "	230
Total levels	730

Power, 10 feet; dip, 68° E.; strike, N. 18° W.
Working, 28 fathoms below water line.

ROCKY BAR MINE, GRASS VALLEY, NEVADA COUNTY.

The Rocky Bar Mining Company was organized and went into operation as a gold mining company in the early part of 1852. The grounds belonging to this company are situated on Massachusetts Hill and upon Gold Hill, in the town above mentioned.

Owing to the lateness of the season at which they commenced operations, and the sudden advent of the rains when but a small part of their adits and shafts were completed, they were obliged to relinquish the working on Massachusetts Hill for the balance of the season, or until the rains should cease, their works not being in condition to afford sufficient drainage.

The company, therefore, proceeded to purchase a group of claims on Gold Hill, from which they commenced the extraction of ore, and its reduction by the machinery which they had erected. The reduction continued until the month of June, at which time the company settled up their affairs; and it was found that, notwithstanding the inordinate high price of labor and necessaries, that the company had met the outlays, which amounted to $47,000.

This was accomplished in the face of every obstacle which the times in which they operated presented; and those acquainted with those early days are best capable of judging what men engaged in this branch of employment had, as a resultant, to encounter.

At the close of 1852 the condition of the workings on Massachusetts Hill were as follows:

An adit had been driven two hundred feet, mostly through soft material, at an expense of ten dollars per foot, and another below it, of the same length, through hard trap rock, at an expense of $8,000.

In addition to the above, five shafts, averaging fifty-five feet in depth, were sunk, at an expense of $500. On Gold Hill, two shafts of fifty feet each, at the same cost as the above.

From the first part of 1853 up to the latter part of 1854 but little work was done upon the mine, from some dissatisfaction of the stockholders abroad. At this period the resumption of operations took place under a new Director, who has proceeded to erect a system of working similar to that proposed in 1853, to free the mine from water, which was the only impediment to progress at the time the operations were relinquished. The present Director has erected a fourteen horse-power engine near the summit of the hill and near the lode, and by the use

of heavy pumps succeeded in freeing the mine and sinking a whim-shaft in connection, that now affords easy communication and ample facilities for all the underground operations that may be required.

The depth of the engine shaft is twenty fathoms, with a diameter of eleven feet by six. It is well timbered and planked, and divided by partitions in such a manner that no impediments can interfere with the working, caused by ingress or egress and the many other incidents that occur in operations of this character.

From the bottom of the shaft, an adit level has been driven eastward two hundred and ten feet, and another westward one hundred and forty feet, each being well timbered and ceiled, and the whole mechanical department is done in a strong and workmanlike manner.

The amount expended in dead work, in the re-opening of this mine, inclusive of the engine, has amounted to $25,000, and the enhancement in value to the property is more than double that sum. In the month of December little more than 1,000 tuns of ore had been removed and reduced since the lode had been reached, and it is to be regretted that with the prospects before them, there appeared a disposition among some of the stockholders to withhold the necessary means that would place their property on a stable foundation and valuable source of profit for many years to come. There requires an outlay at the present time of a sum not less than $23,000, to put that mine in what would be considered a safe and good condition for future operations. The pump shaft should be carried to a depth of not less than thirty-six fathoms, in order to be able to remove the ore on the lode to advantage, and not subject themselves to the necessity of skinning where the lode is at any moment liable to become pinched, from its loose and decomposed character. There is more of irregularity in lodes where much decomposition of their mineral constituents has occurred, and more liability of nipping out in such cases, and should such an accident occur in any mine, it will frequently cost a greater sum to obtain it again than it would to have sunk to the firm rock, inclosing it in the first place at a greater depth.

Another improvement at this mine is most obviously required. This is the erection of their own reduction works; nearly one-third of the amount that would be required to erect a battery of sufficient capacity, and the necessary equipments, has been expended during the three months that they had been reducing ores, or up to the middle of December.

It is to be hoped that the proprietors of this mine may not be blind to their own interests to that extent as to allow so valuable a mine as they evidently possess, to remain a second-rate affair, when such fair prospects of large returns are manifest as in the lode which constitutes their property. But it will be impossible to make that mine what it ought to be, with so small an expenditure of that which has been applied to its opening.

No person in the slightest degree familiar with mining operations, can expect that the bare opening of the mine will in all cases pay not only expenses but a *dividend* on the investment, yet such seems to be the prevailing idea even at this late day, with the experience of years before them to the contrary. And it certainly seems singular our friends abroad should expect such a thing, as they manifestly do under the circumstances.

Those who will examine this mine, and the work that has been performed upon it in its re-opening, cannot but conclude that the money has been judiciously expended, and the only thing to regret is, that a sufficient amount was not invested at once to do the work which is absolutely necessary.

The following statistics will show the present condition of this mine, its expenses and receipts:

Number of men employed, thirty-four.

20 Miners, at $4 per day	$1,920
6 Stokers, at $3 per day	432
2 Engineers, at $125 per month	250
2 Whim Tenders, $100 per month	200
1 Blacksmith, $100 per month	100
1 Carpenter, $100 per month	100
2 Carmen, $80 per month	160
Incidentals	200
	$3,362

Aggregate amount of ore reduced in three months, 1,000 tuns. Average value, $40 per tun	$40,000
Cost of reduction, at $6 per tun	6,000
Length of East Adit, 210 feet, cost $5 50 per foot	1,155
" West Adit, 140 feet, " "	740

Depth of engine shaft, 20 fathoms.

Aggregate expenses on mine for three months	$10,086
Aggregate of dead work, and value of engine since re-opening	25,000
Aggregate receipts	$40,000

Whole amount Adit Levels, 350 feet.
" Shafts, 20 fathoms.

Working eighty feet below water line, pump discharges 260 gallons per minute.

BOSTON MINE, GRASS VALLEY, NEVADA COUNTY.

This mine is at present owned by a French company. No general history of the mine was obtained. The following are their statistics for 1854 and 1855 as nearly as they could be obtained:

Statistics for 1854.

Number of men employed, nine.

4 miners, $5 per day	$480
2 engineers, $160 per month	320
1 battery tender	120
2½ cords wood per day, $4 50	264
2 stokers	160
Incidentals	280
	$1,624

Amount of ore reduced per day, 13 tuns; average value $15.

Aggregate receipts for 9 months	$36,630
" expenses "	14,616
Balance in favor	$22,014

Statistics for 1855.

4 miners	$384
2 engineers	200
1 battery tender	100
2½ cords wood per day, $3 50	192
2 stokers	160
Incidentals	200
	$1,236
Ore reduced per month, 338 tuns; average value $15	$4,070
Aggregate receipts for 8 months	$32,560
" expenses "	9,888
Balance in favor	$22,672

The workings of this mine thus far have been confined mostly to the surface. No considerable depth has as yet been attained upon the lode. The affairs of the company appear to be managed in a prudent and economical manner. Their machinery is light but effective for its weight.

OSBORN HILL MINE, GRASS VALLEY, NEVADA COUNTY.

The Osborn Hill Mine and that of the Lawrence Hill, adjoining, and which is the property of one company, are situated about two miles east of the town. The reduction works of the company are situated on Wolf Creek, near the middle of the village. The mine was one of the earliest that was opened in the State, and has continued in active operation since the early part of 1853. As was the usual case with most of the veins that were worked during that period, this mine, like others, was worked without much system until the latter part of 1853, when the company adopted a much more systematic course than had been previously observed.

During 1853 the following work was done upon the lode of Osborn Hill: An adit was driven to the intersection of the vein on one side, to the length of one hundred and ninety feet. At the contact the lode was found to have a dip of twenty-seven degrees. From the termination of the adit two levels were carried to the length of one hundred and twenty feet each, and one winze sunk to the depth of twenty-five feet. At the bottom of the four-fathom winze the lode had acquired an angle of forty-one degrees. Subsequent to this another adit was commenced fifty feet below the former and carried to the length of one hundred and twenty-five feet, the last fifty feet of which was carried into the green-stone trap, which was very hard and compact.

From the very heavy expenses attending the driving in this rock and the great distance that it would be necessary to carry it, the enterprise was abandoned.

At this time there was considerable water in the mine, and as the season advanced it was judged most prudent to abandon this part of the lode for the present and attack it at a more advantageous point, with the exception of the extraction of such ores as were available above the points of drainage. Accordingly in 1854 the lode was opened on Lawrence Hill some six hundred feet to

the north of the old workings. On this hill the company put in what may be considered their first permanent workings.

On this hill they commenced and carried down a large whim shaft to the depth of nineteen fathoms. From the bottom of this shaft a level was carried north about one hundred and sixty feet and south one hundred and thirty feet. These two levels laid out a heavy bed of good ore two hundred and ninety feet in length.

The advantage of this deep whim shaft will become apparent when it is stated, that it cuts the lode fourteen fathoms below the lowest point worked in the old operations of 1853, and for a length of six hundred feet will drain that part of the mine, thus affording an opportunity to extract that mass of ore at any future day. During 1855 the works have been continued in this part of the mine. The north level is carried to the length of two hundred feet, and the south level to one hundred and sixty feet. On the north level two winzes have been sunk to the depth of five fathoms, and on the south level one winze to the same depth. A breast of fifty feet has been carried down to the depth of six fathoms below the winzes. The lode is now opened and in condition for drainage to the depth of twenty fathoms below the old workings and with which the vein is continuous, and will keep the mine clear of water to the depth of thirty-nine fathoms for the length of eight hundred feet south. The engine now discharges the water from the main shaft, and with its lateral attachments, to the depth of one hundred and forty-two feet.

The cost of sinking the engine shaft was thirty-three dollars per foot, and in fact the best investment ever made upon the mine. They are now working sixty-eight feet below the water line on this part of the lode.

The following statistics will show the comparative expenses of working during 1854 and 1855:

Statistics for 1854.

20 Miners, $80 per month	$1,600
2 Engineers, $112 "	225
2 Battery Tenders	150
5 Stokers	250
2 Shaft Tenders	200
1 Blacksmith	75
1 Carpenter	75
2½ cords wood per day, at $4 50	240
Teaming	900
Total	$3,715
Dead work on engine shaft at $33 per foot	$3,828
Average amount ore reduced per month, tuns	520
Average yield per tun	29
Average yield per month	14,880
Aggregate yield for 7 months	$104,160
Aggregate expenses for 12 months	48,408
Balance in favor	$55,752

Statistics for 1855.

18 Miners, at $75 per month	$1,350
2 Engineers at mill	200
2 " at mine	160
2 Battery Tenders	120
2 Shaft "	120
3 Stokers	150
1 Carpenter	65
1 Blacksmith	65
2½ cords wood, at $3	156
Teaming, $20 per day	480
Total	$2,866
Engine and dead work for mine	$10,000
Amount ore reduced per month, tuns	520
Average value per tun	$25
Aggregate receipts for 6 months	$78,000
Aggregate expenses for 12 months	44,828
Balance in favor	$33,172

RECAPITULATION OF WORKINGS.

For 1853.

	Feet.
1 Adit	190
1 "	125
Total Adits	215
2 Levels, 120 feet each	240

1 Winze, 5 fathoms; 6 Shafts, 240 feet.

For 1854.

	Fathoms.
1 Whim Shaft	19
	Feet.
1 Level, north	160
1 " south	130
Total Levels	290

For 1855.

	Feet.
1 Level, north	40
1 " south	30
Total Levels	70

	Fathoms.
3 Winzes, 5 fathoms each	15
1 Breast	6

It should be borne in mind, that during those periods in which improvements are going on, the companies are obliged to retain their men at ruling rates, though no ores are reduced in the interim. This frequently subjects them to heavy expenses, as in the case before us, and also with most of the other mines in the State who date their opening in 1852 and 1853.

The ores of this mine still retain their peculiar characteristics as in the preceding year; the arsenical sulphurets predominating.

EMPIRE MINE, GRASS VALLEY, NEVADA COUNTY.

The reductions of this company are situated in the town of Grass Valley.

The lodes, which constitute this mine, are situated one upon Ophir Hill and another upon the hill known as the Ben Franklin, and about one and a half miles east of the town.

The company commenced its operation in 1852, and have continued almost uninteruptedly since that year, or more particularly so from the early part of 1853.

Most of the workings during 1853 were of the superficial character that was so general throughout the State in this department of mining, owing to the then prevailing idea that was promulgated by pretenders, that the lodes would, in all probability, give out at small depths below the surface.

In the latter part of 1854, the company, like their neighbors of Osborn Hill, commenced their first permanent improvements. This was done by sinking a large whim shaft to the depth of seventeen fathoms, and the driving of a series of adits and levels from the bottom of the shaft.

The opening consisted in driving what are known as the east and west levels, which are one hundred and twenty feet apart.

The west level was driven north of the main shaft three hundred and twenty feet, and south of the same one hundred and forty feet; and the east level corresponding to the former.

Between the levels and south of the shaft two winzes of one hundred and twenty feet each were driven, and north of the shaft another winze of the same length and which extended east of the east level sixty feet, connecting with another smaller level which had been driven to the length of ninety feet; a winze, one hundred and eighty feet was also carried to the depth of thirty-five feet between the east and west galleries, and was subsequently carried entirely through to the depth of one hundred and twenty feet.

The mine was, therefore, divided into six compartments of about one hundred feet square, and all connected directly with the main shaft, affording easy communication with the surface and the advantage of uninterrupted workings in all parts of the mine.

During 1855, a large proportion of this ore was sloped out and reduced, and at the time I visited the mine the company had commenced opening another level one hundred and seven feet west of the engine shaft, and had made a cross-cut seventy-six feet in length.

On the Ben Franklin lode an adit had been driven one hundred and seventy feet, at which point the vein was cut, and a level was being driven to the south, which, in December, had attained the length of thirty-five feet. A considerable body of ore had been delivered to the surface, having many of the characteristics of Ophir Hill.

The character of the ores of this lode are such, that the gold which it contains, is in a free state, owing to the extensive decomposition of the pyritous elements originally contained within it. There are some portions, however, which require calcination, in order to liberate the metal. The depth of seventeen fathoms has not been sufficient to produce a solid wall to the lode, though all the mines which have opened in this vicinity have presented this feature usually at about half that depth.

From the position of the green-stone, it is highly probable that a few feet below their present workings, this rock will be met, as in the adjacent country.

The following statistics will give the operations of this mine for 1854 and 1855:

Statistics for 1854.

Number of men employed, thirty-six.	
20 Miners, $5 per day	$2,400
6 Stokers, $4 "	576
2 Engineers, mine	200
2 " mill	260
2 Battery Tenders	180
2 Shaft Stokers	120
1 Amalgamator	130
1 Carpenter	130
1 Blacksmith	130
4 cords Wood per day, $4 50 per cord	432
Teaming, $25 per day	600
Total	$5,158
Sinking Engine Shaft	1,500
Aggregate expenses for 10 months	$51,580
Dead work	1,500
Total expenses	$53,080
Aggregate ore reduced, 5,200 tuns.	
Aggregate value ore reduced	130.000
Balance in favor	$76,120

Statistics for 1855.

Number of men employed, thirty-eight.	
21 Miners, at $4 per day	$2,184
6 Stokers	432
2 Engineers, mine	180
2 " mill	200
2 Battery Tenders	180
2 Shaft Stokers	120
1 Amalgamator	100
1 Carpenter	100
1 Blacksmith	100
4 cords Wood per day, $3 per cord	288
Teaming	500
Incidentals	500
Total	$4,884
Aggregate expenses for 9 months	$43,884
Dead work	2,000
Total expenses	$45,884
Aggregate ore reduced, 4,680 tuns.	
Aggregate value, at $25 per tun	116,000
Balance in favor	$70,000

In regard to the figures given, touching the valuation of ores not only of this mine but those of several others, I will state that I am fully aware that they are actually below what they have averaged for months consecutively; and in these statements I prefer to err by being below the absolute yield than to commit an error in being above their value.

My object and aim in these statements has been to place the results of these adventures before the public in such a form as will have a tendency to convey a more lucid idea of the probabilities of success or failure in this branch of employment. In giving these figures, it may be that I have overstepped the bounds of prudence, and perhaps, to some extent, the confidence of those who have from time to time furnished me with the statistics of their operations; and if so, my only apology for so doing is, that we have arrived at that period in our history when it has become incumbent upon us to demonstrate the practicability or impracticability of operations of this kind within this State, and to divest the business, as much as possible, of either the suspicion that rests upon it, arising from the precedents of gold mining in other States and countries, or, the surmises of success or failure, by which it is at present encompassed.

Original capital paid in (cash)	$32,000
Nominal capital	600,000

Month of August, one dividend on nominal capital, 1 per cent.
" September, " " " $\frac{1}{2}$ "
" October, " " " $\frac{1}{2}$ "

HELVETIA AND LAFAYETTE MINE, LAFAYETTE HILL, GRASS VALLEY, NEVADA COUNTY.

The above mine was located in 1851, and soon after its location the company commenced operations in the opening of their lode. It was not, however, until the early part of 1852 that any considerable amount of excavation was made; and it is from this period that the mine should date its beginning.

During the general crash that befel most of the *gold mines* in that year, this company pursued a uniform and continued course of working throughout the panic, and carried their operations through, almost uninterrupted, up to the present date. It is therefore one of the oldest established mines in the State, and ranks one of the first among the pioneers of gold mining in California.

From the first opening of the lode on Lafayette Hill, up to the close of 1855, the reduction works of the mine were situated nearly two miles from their vein; they have, consequently, been subjected to a heavy expense in transporting their ores to the mill. During 1855 they have erected a new and capacious mill directly upon their lode, the machinery of the reduction works doing nearly all the labor of hoisting of ores, pumping, etc., that had previously been done by hand, on the mine.

During the years 1852 and 1853 the workings on the lode at Lafayette Hill consisted in the following amounts:

An adit was carried from the north side of the hill to the length of two hundred feet, and from the end of this a level was commenced and driven on the vein to the length of eleven hundred feet, at an average depth of nine fathoms below the surface. On the strike of the vein some eight shafts were sunk, four of which were nine fathoms, three eleven fathoms, and one thirteen fathoms; each of these shafts were supplied with a hand-windlass, and from most of them ores were delivered to the surface alternately.

After the level had been carried through, and a connection formed with the surface by means of the adit, the shaft delivery of ores was abandoned, and the mineral matter taken to the surface by the latter means. During 1854 all the ores were taken out by this channel on train-ways laid for the purpose.

During 1854 the underground workings consisted in breasting down the lode for nearly its entire length, which was carried to the depth of seven fathoms. The walls of the lode being for the best nine fathoms, a very compact and hard greenstone trap, the lode and walls requiring blasting every foot that was excavated.

During the year 1855 the company have completed the erection of their new mill, as above mentioned, and the subterranean workings to connect with it, are as follows:

From the end of the adit a heavy cross-cut has been carried northward forty-six feet, at an average expense of forty dollars per foot; at the end of this a shaft (engine shaft) six feet by eight, has been sunk to the depth of fifteen fathoms, heavily timbered and planked throughout. The cross-cut connects with the 1,100 feet level, and thus easy and efficient communication is established with the surface of the mine throughout.

From the bottom of the engine shaft a level is to be driven during the coming year, the end of which is to be equal to that of the main level of 1,100 feet, and at its completion a body of ore will be placed in position to be sloped down, having an average depth of twenty-eight fathoms below the present line of workings. This, it will be seen, will afford facilities for obtaining ore to any amount that may be desired for at least three years to come.

The reduction of ores during the past year, have not been as extensive as for-

merly, from the fact of heavy and costly improvements going on, and the desire to avoid the burdensome expense of the transportation of ores to such a long distance. This expense will be entirely saved during the coming year, and will materially increase the net receipts to an amount little short of $11,000.

The greatest depth attained in the lode, at the close of 1855, was twenty-four fathoms; at this point the vein carries a power of four feet. At this depth there appears to be a material change in the mineral character of the ore from that of the preceding year, with the exception, perhaps, of a slight increase of the arsenical sulphurets, but even this is questionable.

Lead and a small quantity of molybdenum, with occasional traces of zinc as formerly, are among the products of the ore.

The following statistics will furnish some additional information of the operations of this mine, and also its present working condition:

Statistics for 1854.

Number of men employed, twenty-four.	
16 Miners, at $100	$1,600
2 Engineers, at $125	250
2 Battery Tenders, at $100	200
2 Stokers, at $75	150
1 Blacksmith	125
1 Carpenter	125
2½ cords Wood, at $4 50	299
Teaming, $30 per day	780
Incidentals	650
	$3,529
Aggregate ore reduced in eight months, 4,160 tuns.	
Average yield, at $18 per tun	$74,880
Amount dead work	6,450
Total receipts	$74,880
Total expenses	42,348
Balance	$32,532

Statistics for 1855.

Number of men employed, forty-five.	
34 Miners, at $80	$2,720
2 Engineers, at $125	250
2 Battery Tenders	200
4 Stokers, at $55	220
1 Blacksmith	125
1 Carpenter	125
2½ cords Wood, at $3	195
Teaming, $30 per day	780
Incidentals	650
	$5,265

Aggregate ore reduced in eight months, 4,000 tuns.

Average yield, at $25 per tun	$100,000
Dead work on mine	30,000
Cost of Mill	20,000
Total receipts	$100,000
Total expenses	92,120
Balance	$7,880

Below will be found a recapitulation of the condition of the mine on the 1st of January, 1856.

RECAPITULATION.

	Feet.
1 adit	200
1 level	1,100
	Fathoms.
4 shafts, each	9
3 "	11
1 "	13
1 engine shaft	15
1 air shaft	12
Total	60

Strike, east and west; dip, north 41°. Power, four feet.
Working fourteen fathoms below water line.

MOUNT WASHINGTON MINE, FRENCH GULCH, SHASTA COUNTY.

In the northern part of the State this company were pioneers in this branch of industry. The mine and reduction works are situated on French Gulch, about two miles from the town, and on the Shasta and Yreka Roads.

Simultaneous with many of the openings made in the early part of 1852, in the middle and south part of the State, this company located and opened their lode in this region. During that year and the subsequent one, a considerable amount of loss was sustained in their operations, arising from the unsystematic methods adopted in working. The lode was found to be valuable, and the utmost confidence was reposed in its productions, but the necessity of a radical change in the conduction of their operations became apparent to all concerned, in order to insure success and profit from their property.

Accordingly a new directorship was the first result of the above conclusion, and which saved the mine literally from total abandonment.

On the advent of the new administration the mine was heavily involved, but by the month of September, 1853, the entire liabilities were discharged from the proceeds of the mine, over and above expenses. During that year the company drove an adit at an expense of $1,800, which was 130 feet in length, and opened a line of level together with the adit, which amounted in their aggregate to nearly 300 feet. During the latter part of 1853, and to the close of the year

ending August, 1854, they had expended in improvements on the mine, $1,080 additional, in placing the workings in a stable condition.

The employees upon the mine during the latter period averaged nine men for each month during the year, at an aggregate expense of $1,360 per month, inclusive of board; and the incidental expenses amounted to about $175 per month additional.

The receipts from the mine during the same period were as follows:

September, 1853	$7,341 20
October, "	5,012 00
November, "	4,508 58
December, "	3,262 80
January, 1854	5,246 40
February, "	4,170 20
March, "	6,777 20
April, "	5,420 45
May, "	3,280 40
June, "	2,618 80
July, "	2,594 40
August, "	3,000 00
	$53,232 43

Cash capital	$7,000
Expenses for year	16,320
Dead Work	2,880
Receipts	$53,232 43
Expenses	19,200 00
Balance	$34,032 43

From the above statement it will be observed, that from May to August there is a diminution in the monthly receipts. This occurred from the failure of water during those four months to that extent that not over one-half running time was actually made, the water for the motive power being derived from the creek on which the mine is situated.

The lode is situated superiorly in slates, and inferiorly in the trap rock. The ores are peculiar, and differ somewhat in their general appearance from most of the ores of other mines. The attendant metallic compounds are lead, molybdenum, arsenic, iron, and a small quantity of copper, all in the form of sulphurets, but much more intimately blended than is usual in other parts of the State. Associated with these is metallic gold, easily visible, but more commonly invested by its associated minerals. It is probable that a considerable per centage of silver abounds in these ores, though no absolute experiment has as yet been instituted to ascertain that fact. The following is the present condition of the mine and its workings, with expenditures and receipts for 1855:

Since the latter part of 1854 an adit has been driven two hundred and twenty feet, which cuts the main lode ninety feet from the surface. The upper levels have been driven to the length of five hundred and twenty-two feet, and from the western end of the latter an inclined shaft has been driven on the lode to the depth of thirty-two fathoms. In the course of driving on the lower adit of two hundred and fifty feet, several beds of ore amounting to twelve feet in thickness

were driven through, each containing gold, but insufficient to warrant its extraction in preference to the main lode.

The train-way from the mouth of the mine to the reduction works has been completed, and is three-fourths of a mile in length. It is carried over two inclines of eight hundred and twenty-seven feet in length each, and has cost for its completion, $5,400. The running time for 1855 has amounted to eight months only, the balance of the year being lost from insufficiency of water for power in part, and necessary improvements.

RECAPITULATION.

Number of men employed, 12.			
3 Miners, $90 per month			$270
2 Battery Tenders, $60 per month			120
1 Superintendent, $150 per month			150
4 Stokers,	50	"	200
1 Blacksmith,	70	"	70
1 Cook,	60	"	60
Incidentals,	50	"	50
			$920

Ore reduced per month, 117 tuns. Average value, $24 62 per tun.
Aggregate ore reduced for eight months, 936 tuns. Aggregate value, $22,132.

Dead Work	$6,090
General Expenses	7,360
	$13,450
Balance in favor	$8,682

CONDITION OF MINE WORKS.

	Feet.
1 Level	522
1 Level	222
1 Level	97
Total Levels	841

	Fathoms.
1 Shaft	30
1 Shaft	12
1 Shaft	23
Total Shafts	66

Depth below water line, twenty-two fathoms.

MARBLE SPRING MINE.

This mine is situated on a branch of the North Fork of the Merced River, in Mariposa County, and the highly metalliferous character of the quartz and the uniformity of its yield in gold renders it one of the most interesting of the quartz mines of California.

The ore is a grayish blue quartz, very hard and solid, containing large quantities of sulphurets of iron, zinc and lead, the latter predominating. From ten to twenty per cent. of the ore consists of sulphurets. The gold yielded is of a low degree of fineness, not averaging over 790-1000, and giving so great a proportion of silver, that taken in connection with the argentiferous galena produced and the general appearance of the ore, it is not unlikely that the mine may, when more extensively and deeply worked, prove to be a silver mine; it now bears all the appearance of what the Mexicans call *oroche*.

The mine was discovered and located in the summer or fall of 1851, by Silcott, Bunyon, McPhane, Harvey, Humphries and Davenport, and by them sold to the Empire State Quartz Mining Company. New claims have been located in continuation of the same vein by the present proprietors, and it is now claimed by them to the extent of about 1,760 yards.

The general course of the vein is nearly north and south, passing along the back of a ridge of high hills, along whose base, upon one side, flows the Marble Spring Creek, and upon the other, the North Fork of the Merced.

The vein lies between trap rock upon the upper side and slate on the lower, and all the ore is obtained by blasting. It stands at an angle of about fifty degrees, and has kept an average width of two to three feet, and increasing in breadth downward.

The advantageous position of the vein has rendered it unnecessary to sink shafts. Four tunnels have been run in, each twenty to twenty-five feet perpendicular hight the one above the other, and starting at the base of the hill and continuing upon and in the direction of the vein, northerly. Their respective lengths, commencing at the lowermost, are three hundred and fifty, two hundred and fifty, two hundred and one hundred feet. They have been opened up, one into the other, and the trap rock taken from above the vein has been used to stow away in the place of the quartz taken out, leaving the tunnels about six feet high and five feet wide, for the conveyance of the ore from the drifts. The ore is conveyed in cars upon train ways from each tunnel direct to the mill, which stands within one hundred yards of the mouth of the openings.

The total amount of ore taken out, to the commencement of the present working season, has been 1,300 tuns, the whole of which has been reduced without selection, and has yielded $56,197 in gold, being an average of forty-three dollars per tun of 2,000 pounds.

The ore is delivered in the mill at a cost of about five to six dollars per tun. The works at the mines, in addition to the necessary out-buildings, smith-shops, etc., at this time consists of a steam mill, having an engine of fifteen-horse power, running ten stamps of five hundred and thirty pounds each, and capable of reducing to a fine powder ten to fifteen tuns of crude ore per day of twenty hours.

The process of collecting the gold consists of blankets, Goddard's Amalgamating Tubs, and lastly, a newly invented riffle box.

The fuel used is pine wood, of which great abundance is found in the immediate vicinity, and is delivered at the mill for four to five dollars per cord.

The number of hands required and the wages paid are as follows:

Superintendent of Workmen, per month	$100
" Amalgamating	150
First Engineer	130
Second Engineer	75
Carpenter	60
Teamster	50
2 Stamp Feeders, each $50	100
Cook	50
6 Miners, $80 each	480
	$1,195

In addition to salaries, all the employees are boarded, which costs the establishment about twenty dollars per month for each man.

PITTSBURG MINE, NEAR NEVADA, NEVADA COUNTY.

This mine was located in the month of September, 1850, by the present proprietor, R. S. Whigham. After its location and during the following year, the engine and appurtenances for reduction were manufactured for this mine in Pittsburg, and shipped in November of the same year.

On the 20th of June, 1852, the engines and batteries were erected and ready for running, and during that month went into operation.

During the erection of the mill, house and machinery, a shaft had been sunk on the vein to the depth of seven fathoms, and an adit driven two hundred and sixty feet, which cut the lode at this point, at right angles to its strike; a level was then driven northward for two hundred and sixty feet, which gave the same length of backs on the lode ready for excavation.

In addition to the above, a train-road was laid from the mouth of the adit to the mill, a distance of five hundred and sixty feet.

From the month of June, 1852, to the end of the year (June, 1853,) the mine was in active and constant operation, obtaining the ore exclusively from the Pittsburg lode, the yield of which varied from ten to fifty dollars per tun, the average for the year being twenty-four dollars and ninety cents per ton. At this time the mine was leased to the West Mariposa Quartz Mining Company for a period of two years, their lease expiring on the 25th of June, 1855.

The operations of this company were under the principal superintendence of S. M. Murry, the English company's agent, who, with his attaches, commenced operations in their characteristic style, and closed out their labor department in 1854, with the exception of such as required the use of ink and paper only.

At the time this company took charge of the Pittsburg Mine it was well opened, and in good working condition. They had driven an adit but a short distance south of the former workings, when a *peculiar* idea seized the minds of the Directors, that the lode would run out at some future time, if they persisted in following its legitimate and well-defined course. Accordingly, an order was issued to cease operations *on the lode*, and to drive in a direction at nearly right angles to the strike of the vein, that they might strike it again at a point some distance ahead, where the merest novice would see that such an event would be a total impossibility, from the line of cutting adopted, and the distinct, well marked course of the river.

At the point of the *new* workings they left a lode whose power was sixteen inches, and had increased nearly four inches in twenty-seven feet on the line of strike; and after driving as directly as possible to the distance of ninety-three feet

away from the vein, they arrived at the sage conclusion that the lode had run out, and reported accordingly to the parties by whom they were employed.

In this case we have one of those *strange* feats of nature, that are so remarkably rare in their occurrence that they are regarded as phenomena of great interest, and find a place in annals of science, to be handed down to posterity.

This was no other than an optical delusion on the one hand, and an extraordinary pre-vision on the other. For in the one case their optical powers would not permit them to discern an eighteen-inch lode two hundred and sixty feet in length, over which they were obliged to pass constantly in and out of the mine, and on the other hand their mental powers were of sufficient strength to descry a lode one hundred feet beneath the surface, and ninety-three feet from any point that one could possibly exist.

The result of these operations was, that they had the effect of nearly ruining one of the most valuable mines in the State, and at the expense of about $20,000 for their stockholders at home. This magnificent failure (to call it no worse name,) of the foreign company, soon made the Pittsburg Mine a by-word rather than anything else, and injured that property to an extent, that had it been put under the hammer it is doubtful if the whole concern would have brought the first cost of the engine, and a more sad mistake was never made than the lease of this property under the circumstances.

There is no censure that is too severe for conduct like the above. On the 25th of June, 1855, the proprietors again came in possession of the property by the expiration of the lease, and at the time I visited the mine they had repaired their machinery, and had commenced the reduction of ores again from the mine. The period in which ore had been reduced from Pittsburg Hill was about two months, and at no time had it yielded a less sum than twelve dollars per tun, and ranging from that to forty-six dollars per tun, thus showing that the mine was worked with its former success.

How is it that men unskilled in metallurgy and mining can succeed in this manner, and such universal defeat mark the progress of men making high pretensions in those departments, who have been, and still are, engaged in the same branches of industry in our midst? I am not disposed to reproach or criminate where it is not justly due, but at the same time I cannot permit some things to pass unnoticed where a State is to be the sufferer, even though it may prejudice the private interests of friends, acquaintances or individuals.

This subject is by no means exhausted. Much more might be said than here committed, not only in relation to this, but other operations similar in character. But I have no desire to drag personal conduct and management into a public document, it is far more fitting for a private journal.

I have thus far seen no reason to retract one syllable from the remarks that may be found on page Eighty-Four, Document No. Fourteen, Session of 1855, but each additional feature that presents itself relating to this subject would only place that language in a still stronger position.

The following statistics will show the operations of this mine for 1853, the full running time being nine months, the period named would constitute at that time the workings for one year.

Number of men employed, eighteen.

8 Miners, at $100	$800
4 men at Mill, $4 per day	416
1 Carman	50
1 Shaft Tender	60
1 Engineer	100
1 "	75

2 Battery Tenders, at $75	150
3 cords Wood per day	234
Incidentals	208
Total monthly expenses	$2,093

Engine and Mill	$30,000
4 Shafts	1,344
1 Adit	2,080
1 Level	3,120
1 Train Way	6,720
Total dead work	$43,264

Aggregate ore reduced, 4,680 tuns. Average yield per tun $24 90.

Aggregate monthly expenses	$18,937
" receipts	112,320
Balance in favor	50,000

RECAPITULATION.

	Fathoms.
4 Shafts	7

	Feet.
1 Adit	260
1 Level	260
1 Train Road	560

Working three fathoms below water line.

This brief history and statistical matter of those mines, from which we have the returns of their operations for the periods given, is sufficient to show the healthy and stable condition of this branch of employment, and their yield is fully sufficient to warrant all that I have said in former reports relating to their intrinsic value. The rapid increase in the number of mines, during the past three years, may also be taken as an evidence of success; more particularly so when it is known that this species of property does not appear as stocks either in foreign or domestic markets.

Their rise and advancement, therefore, cannot be attributed to speculation, or jobbing, at home more particularly, for here this property has not, as yet, divested itself of those opprobriums that unprincipled speculators (who were more willing to earn their living by any other means than legitimate labor,) on the one hand, and the inconsiderate manner of investment and working on the other, attached themselves, like deadly parasites, during the days of its comparative infancy. But a kind Providence interposed, and soon produced a *finale* to their *brilliant* career.

Unsupported by any of those extraneous influences usually brought to the support of faltering mining property, they have lived beyond the possible reach of further injury from the causes that have hung with so heavy a weight upon the reputation and integrity of gold mining in California. It would be interesting to review their past history in full, did time permit, for each mine would furnish

a goodly amount of valuable instruction of itself; but, as a condensed view will serve our purpose equally well, and at the same time convey a clear idea of their advancement and progress, this course will be pursued. I will thus state the number of mines that could be considered in full operation from 1852 to the close of 1855, a period of three years, the figures being the aggregate at the end of each year.

In the beginning of 1852, the number of mines that continued to the close of that year was fourteen. At the close of 1853, the number had increased to thirty-nine. At the end of 1854, their numbers amounted to fifty-one. And at the close of 1855, the total number is sixty-five.

In addition to the total for 1855, as above, there are thirteen companies opening their lodes, preparatory to the commencement of erecting reduction works and the reduction of their ores. But as no reduction works are, as yet, erected, they are not included as in actual operation.

I have pursued the uniform rule, never to consider a mine as having a legitimate existence until it has been in operation one full year in the reduction of ores. For if it can *sustain* itself during that period, and prudently managed, it is certain to do more than this subsequently, in this State.

The strict adherence to this rule has brought us to the above result, as regards the number actually engaged, and which may be considered among the permanent things of the State. But had a departure from this rule been adopted, and every little vein on which a mere scratch had been made, recorded as a *mine* in operation, we should, if honest, have been obliged to chronicle failures equally numerous with those that occurred during the "great crash" in this business in 1852. The greater part of those failures were in mines of this character, and many of them even worse than this, viz: failures from having no lode whatever.

Such operations are not legitimate mining, and it is a harsh rule to judge legitimate operations by. To apply such a rule would be equally consistent with the striking illustration of Mr. Everett, who, a short time since, in lecturing before a public body, elucidated the comparative value of gold and the products of agriculture, by which, through immense labor, he proved to his wondering and delighted audience, that the product of that metal from the mines of this State, for five years, amounting to nearly three hundred millions, *did not equal in value the entire products of agriculture of all the States* inhabited by our Atlantic neighbors. If their aggregate had not been sufficient to have swamped us, in this herculean estimate, he could have fallen back on the world at large, and the wonder is that he did not do so.

It was to be hoped that the day had passed by, when we were to suffer such prejudicial detraction from men of high character and education, but it seems otherwise. In years gone by, men of small capacities indulged in such material to astonish and delight. "*Former precedent*" of our capacities in the production of gold was their guide, but that pedestal has slipped from beneath their feet, and they are now silent. But the above comes from a higher source, and conveys more meaning than floats upon its surface. What heinous act have we, as a people, committed, that Atlantic *savans* should thus seize every opportunity to detract from even the *small* amount of *credit*, which, on *fitting* occasions, they are willing to acknowledge is our due. It is not enough that we send them from fifty to sixty millions per annum, for the material which each year they *force* upon our markets, and furnish large sums for many of their *internal improvements* to the prejudice of our own, but we must then be coolly told that the labor of eighty-six thousand men does not equal that of the balance of the Union. And would thus insinuate an idea, which their tongues would parch at, did they attempt boldly to utter. I hope I may not have misconstrued the import of the remarks alluded to, but I can place no other construction upon them.

In the appended tables will be found the aggregate product of eighteen mines, for the years 1854 and 1855, presenting, in a condensed form, the results of each; and for the items from which these figures have been derived, the reader is referred to the history of the individual views in the preceding pages.

From these returns, some approximate estimate may be made of the character and importance of this branch of employment, and the position that we maintain as a mining State, compared to one of the greatest mining nations on the globe.

In carefully reviewing the operations of the English, Welsh and Irish mines, for forty-three years, and those of Cornwall and Devon, the close of 1847 presents us with some interesting facts and figures relating to the product of those mines, and by which we may form some estimate of the value of our own.

From the Welsh, Irish, and English, mines, there were raised and sold in forty-three years the amount of 417,040 tuns of copper ores, being the product of ninety-one mines for the above period. Upon this ore I place an average value of fourteen pounds sterling per tun, being a higher sum than would be claimed for those ores by those best acquainted with their value.

Their aggregate would therefore be equal to $29,192,800, giving an average product for each year from the ninety-one mines of $681,730 per annum.

The product of one hundred and three mines of copper in Cornwall and Devon, ending in 1847, amounted to 37,000 tuns, which, at the same price as the above, gives us an aggregate of $13,076,015 as their value.

The total number of mines engaged, it will be seen, amounts to the number of one hundred and ninety-four, the aggregate product of which in value, is $42,-268,815.

This shows us an average per annum, from the total number of mines, of the sum equal to $972,763.

During 1854 eleven of the gold mines of this State produced $777,790; and in 1855 eighteen mines produced the amount of $2.216,697, being an increase of $1,438,907 over that of the preceding year. The aggregate product in value from the total number of mines in two years being $3,016,951. Thus we find that the mines of copper of the United Kingdom, and amounting to one hundred and ninety-four in number, do not produce an annual aggregate in value equal to eighteen mines of gold in our own State.

RECAPITULATION OF THE PRODUCT OF ENGLISH COPPER MINES.

91 Irish, Welsh and English Mines produced in forty-three years the value of	$29,192,800
103 Mines of Cornwall and Devon, ending at same date	13,760,015
Total	$42,952,815
Aggregate and average product per annum	$972,763

RECAPITULATION OF THE PRODUCT OF CALIFORNIA GOLD MINES.

11 Gold Mines of California produced in one year, 1854	$777,790
18 " " " " " 1855	2,239,161
Total	$3,016,951
Aggregate and average product per annum	$1,625,520

Prior to this time speculation has been the principal guide in the estimates of gold mining in this State, but at the present time we have something more tangible to rest upon; and it is to be hoped that hereafter those engaged in this employment will not so stubbornly withhold statistical matter, so necessary in forming opinions in regard to any branch of business whatever. We cannot establish the integrity of our mines by any other means, and so long as it is withheld it must, and will, cast a shade of doubt on all such operations. It is a known fact, that nearly every mine in active operation in 1854 declared at the end of the year a handsome profit on investment and labor, yet it is impossible almost to draw any facts from the proprietors of the greater portion of them.

I have in my possession at the present moment the receipts of eight additional mines for 1855, obtained from parties indirectly interested, and on whom reliance can be placed, but with whom it would be a breach of confidence to make public the figures furnished. I have omitted their publication for this and an additional reason, viz: that the expenses of these mines for the same period are unknown. These figures would swell the amount already given for the past year to $3,641,090.

Had we the full returns of the product of the fifty-two mines that have continued in operation through the past year, it would be safe to presume that their aggregate product would fall but little short of $6,000,000.

TABLE

Exhibiting the number of Mines from which returns have been received up to 1854 *and* 1855, *with their depth, in fathoms, below the water line and amount of ores in tuns reduced; together with the aggregate receipt from the same.*

NAMES.	Depth below water	1854. Ores raised.	1855. Ores raised.	1854. Receipts.	1855. Receipts.
	feet.	tuns.	tuns.		
Badger	26		1,080		$35,000
Midian	12		840		9,000
Union	21		1,000		18,000
Keystone	23	2,204	3,000	$52,000	60,000
Eureka	17	1,400	1,296	48,000	33,000
Pacific	9		1,924		39,000
Experimental	4		1,000		12,000
Mammoth	3	1,095	1,095		28,000
Spring Hill	17	900	2,074	20,000	46,000
Herbertville	28	3,400	1,200	72,000	20,000
Rocky Bar	14	1,200	1,000	47,000	40,000
Boston		2,088	2,674	32,000	36,000
Osborn Hill	12	4,680	3,120	104,000	78,000
Empire	12	5,200	4,680	130,000	116,000
Mt. Washington	16	2,670	936	56,000	22,464
Helvetia & Lafayette	14	4,160	4,000	100,000	74,000
Marble Springs	9	To date.	4,320		56,197
Pittsburg	3	3,000	1,000	112,000	19,000
Totals				$777,790	$2,239,161

Total for 1854 and 1855..... $3,016,951.

EXAMINATION OF THE SULPHURETS OF IRON FROM QUARTZ CONTAINING GOLD.

These sulphurets were taken from the tailings of mines in different parts of the State, and examined, to detect any metallic gold that might be contained in them.

The process pursued to extract the metal is one that would be practicable on the large scale, and was adopted as a means of illustrating the practical results obtainable by those means if fully carried out, and long since suggested.

A detail of the process may not be amiss, though containing nothing that is new.

The sulphurets were separated from the sand by washing, and dried. After being thoroughly dried, they were introduced into a shallow porcelain capsule and roasted at a clear red heat, being constantly stirred, and the heat continued until all fumes of sulphur were dissipated. The mass at this time has the appearance of a coarse brownish-black powder, which, on being reduced to a fine powder, presented all the appearances of being entirely peroxydized, and in this state was of an red iron-rust color.

It is to this condition that it is necessary to bring this mineral in order to extract any gold by amalgamation that it may contain.

After thus reducing to a powder the calcined sulphuret, it was washed and amalgamated, and from the amalgam the following results were obtained:

The quantity used being one ounce avordupois in each case.

Spring Hill Mine	gave	6-8ths grain,	equal to	$270	per ton.
Mt. Washington Mine,	"	3-16ths	"	135	"
Osborn Hill Mine,	"	5-16ths	"	225	"
Empire Mine,	"	1-8th	"	90	"
Eureka Mine,	"	3-16ths	"	135	"
Badger Mine,	"	1-9th	"	80	"
Lafayette and Helvetia Mine,		1-8th	"	90	"

The grain of gold in these cases is estimated at the value of three cents, its fractional value being omitted.

The results are what may be expected in mill work, if properly conducted, and do not represent the absolute amount of gold contained in these minerals. Chemical analysis will show a much greater amount of metal, and would have been presented in connection with the above had it been completed in sufficient time for this report.

I am well persuaded that if the above process had been conducted with that strict care pursued in close and rigid investigations, that at least twenty-five per cent. would have been added to the above figures. My object was to present the probable amount of gold that might be expected, from the reduction of those minerals by a similar process on a large scale, and which are now rejected and thrown away.

It would be difficult to estimate the amount of gold that is thus thrown away each year from these mines, but a comparison of the average yield of the ores of the mines of the State generally, will show that the amount is certainly very large.

The yield of these sulphurets is about seven times greater than the produce in the first instance in the majority of the cases, and they compose about twenty per cent. of the ores as they come from the mine. This being the case, we cer-

tainly sustain a loss of at least two hundred per cent. above the aggregates that are realized from the working of these ores, which would place the amount of metal that escapes equal to six millions of dollars from the eighteen mines, whose operations are reported for 1855.

I have repeatedly suggested to miners the saving and separation of these sulphurets, by those means that are used for the separation and saving of metallic minerals less dense than the sulphurets of iron, and much less valuable. But, as yet, no such means have been adopted, or, at least, but very imperfectly, and is to be regretted that more attention is not bestowed upon this subject.

ANALYSIS OF SALINE WATERS FROM LICK SPRINGS, SHASTA CO.

The analysis of these waters was recently made by Dr. L. Lanswert, and the results are as follows:

The quantity used for quantitative purposes was one gallon.

Solid matter contained in one gallon water—

	Grains.
Chloride Sodium, (common salt)	1,168·0
Sulphate Soda	104·0
Borate Soda	9·6
Borate Lime	12·8
Proto Sulph. Iron, Sulphate Lime, Alumina and Silica	270·0
Loss	35·6
Total grains per gallon	1,600·0

In addition to the above, considerable quantities of the boracalcite of hazes is found upon the surface and on the rocks adjoining.

These springs yield about twelve gallons water per minute, or an amount equal to 17,280 gallons per day.

From the analysis we find that at the present time they are capable of producing of solar salt, 2,628 pounds; borax, 331 pounds; borate lime, 458 pounds, together with a heavy amount of free boracic acid.

This product will be equal to the amount of $3,793 tuns of salt, 556 tuns borax and 659 tuns borate of lime.

On comparing the waters of these springs with those of Tuscany, (which is the principal source of supply of the borax of commerce for the world,) it is found that they produce naturally an amount nearly equal to four times that of the Italian Springs.

The Tuscan springs require two hundred pounds of water at their highest point of saturation to produce one pound of the boracic acid of commerce; this latter contains but about fifty per cent. of the article when refined.

The springs of Shasta produce from one hundred and sixty-five pounds water one pound of the refined borax of commerce, in addition to the other associated salts.

It will be seen then, from the character of these waters, that in a short period hence these articles will become materials of export from our shores, and form an important article in commercial transactions.

GOLD MINES IN OPERATION IN 1855.

NAMES.	Location.	County.	When ope'd.	Power.	Directors.
Mt. Washington,	French Gulch,	Shasta,	1851	Water,	Mr. Swartz.
Eureka,	Seventy-Six,	Plumas,	1851	"	" Coulter.
Mammoth,	"	"	1851	"	" McGee.
Ariel	Downieville Buttes,	Sierra,	1852	"	
Copper Hill,	Minnesota,	"	1855	Steam,	" Gaston.
German Bar,	Middle Yuba,	"	1853	Water,	
Laramie's,	Grass Valley,	Nevada,	1852	Steam,	" Laramie.
Whiteside's,	"	"	1852	"	" Whitesides
Boston,	"	"	1852	"	" Cheevan.
Lafayette & Helvetia	"	"	1852	"	" Conaway.
Empire,	"	"	1852	"	" Hotaling.
Osborn Hill,	"	"	1852	"	" Crossett.
Orleans,	Hoaston Hill,	"	1854	"	" Stackhouse
Gold Hill,	Grass Valley,	"	1851	"	" Atwood.
Mt. George,	Mt. George,	"	1852	"	" Roberts.
Canada Hill,	Canada Hill,	"	1852	"	
Pittsburgh,	Nevada Road,	"	1851	"	" Whigham.
Wyoming,	Deer Creek,	"	1851	Water,	" Lambert.
Gold Tunnel,	Nevada,	"	1851	Steam,	" Kidd.
Illinois,	Deer Creek,	"	1851	Water,	" Adams.
Rocky Bar,*	Grass Valley,	"	1855	Steam,	" Seyton.
North Carolina,	Rough & Ready,	"	1855	"	" Hirsch.
National,	South Yuba,	"	1855	Water,	" Raymond.
Crœsus,	Auburn,	Placer,	1852	Steam,	" Langdon,
Pennsylvania,	Humbug Cañon,	"	1855	"	" M'Martree
Volcano,*	Sarahville,	"	1855	"	" Hancock.
Sierra Nevada,	Grizzly Flat,	El Dorado,	1851	Water,	" Knox.
Eagle,	"	"	1852	"	" McKain.
Mt. Pleasant,	"	"	1851	"	" Steely.
Maryland,	Placerville,	"	1854	"	
Pacific,	"	"	1854	"	" Smith.
American,	"	"	1855	"	
Union,	Aurum City,	"	1852	Steam,	" Foster.
Tennessee,*	Consumnes River,	"	1855	"	" Ray.
Columbus,	Cold Springs,	"	1855	Water,	
Marion,*	Volcanoville,	"	1855	Steam,	" Baker.
Cornucopia,	Logtown,	"	1854	"	
Mills & Co.,	Consumnes River,	"	1855	Water,	" Mills.
Hermitage,	" Ridge,	"	1855	Steam,	" Hoover.
Pochontas,	Logtown,	"	1855	"	
Ranchoree,	Ranchoree,	Amador,	1853	Water,	" Williams.
Amador,	Amador,	"	1852	Steam,	

* Resumed Mines.

GOLD MINES—Continued.

NAMES.	Location.	County.	When ope'd.	Power.	Directors.
Spring Hill,	Amador,	Amador,	1852	Steam,	Mr. Burke.
Keystone,	"	"	1852	"	" Manning.
Midian,	Herbertville,	"	1854	Water,	" Maxan.
Herbertville,	"	"	1852	"	" Davis.
Eureka,	Sutter,	"	1852	"	" Murray.
Union,*	"	"	1855	"	" Tibbetts.
Badger,	"	"	1854	"	" Haywood.
Onieda,	Jackson,	"	1852	Steam,	
Grass Valley,	Grass Valley,	"	1855	Water,	" Smith.
Drytown,	Drytown,	"	1855	"	" McGrady.
Palmer & Co.,	Dry Creek,	"	1855	"	" Williams.
Hingston & Co.,	Drytown,	"	1855	"	" Glover.
Butte,	Butte City,	"	1855	"	" Huffalker.
Foote & Lindsay,	Mokelumne River,	Calaveras,	1855	"	" Lindsay.
Lone Star,	N. F. Mokel. River,	"	1855	"	" Wade.
Texas,	N. & M. F'ks Mok.,	"	1855	"	" Raymond.
Wood House,*	" "	"	1855	"	
Experimental,	Columbia,	Tuolumne,	1854	"	" Pownell.
Wheeler & Co.,	Big Oak Flat,	"	1855	"	" Wheeler.
Marble Springs,	N. Fork, Merced,	Mariposa,	1851	"	" Wheeler.
Washington,	Quartsburg,	"	1852	Steam,	
Ortega,	Bear Valley,	"	1852	"	
Agua Frio,	Agua Frio,	"	1852	"	" Atwood.

* Resumed Mines.

ALTITUDES

BY BOILING POINT AND BAROMETER.

COUNTIES.	Town and Position.	No. Observations.	Boiling Point.			Altitude.	Levels.	Barometer.
			°	′	″			
Yuba,	Camptonville,	8	207	20	20	2,388		2,401
"	Foster's Bar,	6	209	30	00	1,371		1,300
"	Oregon Hill,	2	204	80	00	3,677		
San Bernardino,	San Bernardino,	6	210	20	00	909		
"	El Chino,	4	210	80	00	636		
Los Angeles,	Hill San Pedro,	1	209	40	00	1,544		
"	Los Angeles,	12	211	40	50	250		
Nevada,	Nevada Bridge,	12	209	80	25	1,852		1,810
"	Sugarloaf Peak,	5	207	00	20	2,535	2,475	2,551
"	Grass Valley,	4	207	80	30	2,090		2,021
"	Omega,							4,800
"	Omega Hill,						†5,750	5,650
"	Omega E. Ridge						†6,380	6,350
"	Ridge B. Valley						†7,000	7,088
"	Hodge's House,						†5,162	5,300
"	Bear Valley Gap						†5,376	5,400
"	Omega Gap,						†5,162	5,200
"	Cabin Gap,						†5,088	5,110
"	Mountain Gap,						†5,239	5,210
"	Bear Valley,						†4,786	
"	Steep Hollow,						†4,720	4,780
"	Mount'n Spring,							5,340
"	Alpha,							5,266
Placer,	Auburn,	4	208	80	30	1,072	1,080	1,372
"	Illinoistown,	3	207	80	00	2,234		2,301
"	Mineral Bar,	3	209	00	30	1,121		
"	Mount'n Spring,	4	208	00	30	2,090		
"	Iowa Hill,	12	205	60	30	*3,299		
"	Brush Cañ. Brg.	2	208	20	00	1,947		
"	Brush Can. Hill,	2	207	60	30	2,230		
"	Yankee Jim's,	5	205	80	00	3,185		3,241
"	Michigan Bluffs	3	205	20	30	3,492		3,504
"	Baker's Ranch,	1	205	60	30	3,285		
"	Forks' House,	2	205	00	00	3,622		
El Dorado,	Placerville,	14	207	80	20	2,109		2,058
"	Coloma,	4	210	20	30	835		857
"	Georgetown,	4	207	10	30	2,433		2,484
"	Bottle Hill,	1	207	00	00	2,389		
"	El Dorado,	2	209	30	20	1,371		1,430
Amador,	Herbertville,	3	210	20	30	980		1,004

* Corresponds with a series by Dr. Blake. † By Mr. Homfrey, Engineer.

ALTITUDES—CONTINUED.

COUNTIES.	Town and Location.	No. Observations.	Boiling Point.			Altitude.	Levels.	Barometer.
			°	′	″			
Amador,	Sutter,	5	210	20	75	919		988
"	Jackson,	3	210	00	30	934		
Calaveras,	Mokelumne Hill	8	208	60	30	1,681		
Tuolumne,	Sonora,	6	208	00	30	1,971		
"	Shaw's Flat,	3	207	20	30	2,270		
"	Columbia,	3	207	00	30	2,314		2,166
"	Montezuma,	3	207	40	30	1,787		
Sierra,	Downieville,							2,044
"	Galloway's,							3,586
"	Ariel Mine,							6,090
"	Butte,							8,846
Mariposa,	Agua Frio,							†2,665
"	Mt. Ophir,							†2,635
"	Killaly's Ridge,							†5,000
"	Bullion Knob,							†5,000
"	Steptoe's Lode,							†3,020
"	Harodia's Ridge							†5,125
"	Simpsonville,							†2,865
"	Quartz Station,							†2,880
"	Ridley's Ferry,							†1,450

† By Mr. Homfrey, Engineer.

Document No. .

IN SENATE.] [SESSION OF 1856.

REPORT

ON

STATE PRISON,

BY

Joint Committee of Senate & Assembly.

JAMES ALLEN, STATE PRINTER.

REPORT.

Mr. Speaker:

The Joint Committee, to whom was referred all matters connected with the State Prison, have, in compliance with a resolution passed by both Houses, visited the State Prison at Point San Quentin, and after closely examining and fully investigating the affairs and condition of the said institution, have agreed on the following Report, and beg leave to submit the same for your consideration.

Fully impressed with the importance of their mission, and the responsibility they incurred in the discharge of their duty to the State and to individuals, have availed themselves of every source of information and of every facility within their power for the purpose of gaining possession of each and every fact in relation thereto.

And for the purpose of arriving at correct conclusions, have conducted their investigations with justice and impartiality, with a single view to elicit the whole truth in regard to its past and present condition, hoping that the result of the labors of your Committee might dictate a more wise, judicious and economical administration in the condition and government of said institution.

The first thing that arrested the attention of your Committee was the heavy expenditures made by the State Prison Directors since the State has taken possession of the State Prison.

Your Committee find that in seven months, to wit—from the 1st day of June, 1855, to the 1st day of January, 1856—there have been created obligations or claims against the State to the amount of $388,278 91.

Your Committee have made an accurate measurement of the wall around the State Prison at San Quentin, and find the stone wall to contain 135,304 feet, as shown by the accompanying items and calculations. And the brick wall to contain 1,309,605 bricks.

Your Committee find the amount of wall built greatly to exceed the limits specified by the law authorizing its construction, and after the closest examination are unable to find any good reasons to justify a direct or even incidental departure from the letter of the law. The accompanying plan, showing the lengths of the several walls, also exhibits the utter disregard of symmetry as well as the gross violation of the law itself.

While your Committee is disposed to overlook trivial objections and excuse unimportant departures, yet so great a disregard for the appearance of the grounds as well as the neglect of the interests of the State as this plan exhibits,

cannot be permitted to pass without receiving our unqualified disapprobation. Reference being had to the plan, it will appear that the inclosure is one hundred feet out of square, the south wall being one hundred feet longer than the west wall, thus forming an acute angle on the south-west, and an obtuse angle on the north-west corners; in addition to which, the wall on the south departs from a direct line, running from one extreme to another about three feet; the north wall is objectionable for the same reasons, though the departure is not so great.

Your Committee, on examining the walls, found them built without that regard to strength and solidity that the law prescribes, and that the greater portion of the sand used for mixing the mortar, with which the stone wall is built, was procured from the beach in the immediate vicinity of the prison, and was completely saturated with salt water and unfit to be used in the construction of the walls, as the well known properties of salt tending to moisten everything with which it comes in contact, should have induced the Directors to exclude its use.

Your Committee caused holes to be broken in the walls in several places, and found the mortar still green and moist, and think it extremely doubtful whether it will ever become firmly set.

Your Committee cannot too strongly reprehend the action of the Directors in entering into a contract without first having advertised for proposals and awarding the contract to the lowest responsible bidder, although the law does not require them to do so. The fact that so important a provision was omitted is conclusive evidence, in the minds of your Committee, that the wall was to be constructed by convict labor. Section eight of the Act to provide for the government of the State Prison is as follows:

"The Board of Directors shall, as soon as practicable, after taking charge of the Prison, cause to be commenced and diligently prosecuted until finished, the erection of a wall around the Prison House at San Quentin Point, of the following dimensions and descriptions: The wall to inclose a square of 500 feet on each side, to be four feet thick at the base, twenty feet high and two feet thick at the top, and surmounted with a flat stone coping, six inches thick and three feet broad on top; the lower half of the wall ten feet high, to be built of rough marble stone set in cement, and the upper half of brick set in mortar; the top of the wall shall be level, and the base shall be extended downward to accommodate the inequalities of the natural surface of the bed rock. There shall be a small guard tower erected at each corner of the wall; one large iron gate shall be made for entrance into the Prison yard; the stone and brick shall be furnished by the prisoners; and, as far as practicable, the prisoners shall be employed in laying up said wall."

Had the plain provisions of the law been complied with, the amount of stone work would not have exceeded 110,000 cubic feet, nor would the amount of brick have exceeded 1,250,000; 40,000 feet of stone work would have been laid below the surface, which should have been done by convict labor, and with the aid of a few competent masons the convicts could have erected the entire wall.

The laws require the stone work to be laid in cement, but upon examination we found lime and sand to be the materials principally used, cement only being used to point the outside. The base of said wall is much thicker than the law requires.

By reference to the measurement herewith transmitted, it will be seen that the south wall is 593 feet long, being 93 feet longer than the law authorizes or requires.

Your Committee are of the opinion that the Directors were not vested with discretionary powers in the erection of the wall, but are of the opinion they were bound to comply strictly with the law.

ESTIMATE

Of the Cubic Feet of work in the Wall of the Penitentiary at Point San Quentin

BRICK WORK.

NORTH WALL.

Length.	Hight.	Thickness.	Cubic feet.
202·06	12·10	2·09	7,146·56
42·00	11·06	2·08	1,288·00
22·00	10·00	2·07	568·33
70·00	9·10	2·07	1,778·20
70·00	9·10	2·07	1,778·20
109·03	9·03	2·06	2,526·40
Total in NorthWall			15,085·69

EAST WALL.

Length.	Hight.	Thickness.	Cubic feet.
497·00	10·00	27·00	12,839·25
At East Gate— 10·08	10·00	37·00	382·22
Total in East Wall			13,221·47

SOUTH WALL.

Length.	Hight.	Thickness.	Cubic feet.
224·04	9·06	2·06	5,327·91
86·02	10·00	2·07	2,226·00
8·00	14·07	2·10	330·58
22·00	13·02	2·09	796·58
252·10	13·01	2·09	9,096·67
Total in South Wall			17,777·74

WEST WALL.

Length.	Hight.	Thickness.	Cubic feet.
493·03	12·00	2·09	16,277·25
Total in West Wall			16,277·25

SUMMARY OF BRICK WORK.

North Wall	15,085·69
East "	13,221·47
South "	17,777·74
West "	16,277·25
Total Brick Work, cubic feet	62,362·15

Estimating 21 bricks to the cubic foot, the number of bricks in the Wall will be 1,309,605.

STONE WORK.

NORTH WALL.

Length.	Hight.	Thickness.	Cubic feet.
42·06	17·02	4·08	3,404·70
50·00	16·07	4·08	3,869·44
64·00	16·03	4·07	4,766·67
64·00	16·03	4·07	4,766·67
53·00	21·01	4·10	5,401·26
96·00	20·05	4·06	8,820·00
50·00	12·00	3·11	2,350·00
40·00	9·05	3·09	1,412·50
56·03	9·01	3·07	1,916·00
Total in North Wall			36,707·24

EAST WALL.

Length.	Hight.	Thickness.	Cubic feet.
30·00	9·01	3·10	1,044·55
50·00	9·06	3·10	1,820·83
50·00	9·09	3·10	1,868·75
33·00	12·05	4·00	1,639·00
100·00	13·06	4·01	5,512·50
50·00	11·02	3·11	2,186·80
50·00	9·08	3·10	1,852·78
50·00	10·09	3·11	2,105·21
50·00	15·00	4·03	3,187·50
34·00	22·11	4·09	3,701·04
Total in East Wall			24,918·96

SOUTH WALL.

Length.	Hight.	Thickness.	Cubic feet.
38·00	22·04	4·08	3,960·45
37·00	13·02	4·00	1,948·67
100·00	9·00	3·09	3,375·00
50·00	9·03	3·09	1,734·38
37·04	10·07	3·11	1,547·52
50·00	15·11	4·04	3,448·61
52·00	16·06	4·09	4,075·50
54·00	13·00	4·05	3,100·50
130·00	13·09	4·05	7,894·80
45·00	13·03	4·05	2,633·44

Total in South Wall..... 33,718·87

WEST WALL.

Length.	Hight.	Thickness.	Cubic feet.
37·03	11·03	4·03	1,781·02
100·00	14·03	4·05	6,923·13
150·00	18·04	4·08	12,833·33
46·00	18·01	4·08	3,881·89
50·00	19·06	4·10	4,712.50
100·00	20·04	4·10	9,827·78

Total in West Wall..... 39,959·65

SUMMARY OF STONE WORK.

North Wall.....	36,707·24
East "	24,918·96
South "	33,718·87
West "	39,959·65
Total cubic feet of Stone Work.....	135,304·72

Length of Coping, 3 feet wide on top—

North Wall, feet.....	519·04
East " "	510·00
South " "	596·04
West " "	496,06
Total length of Coping.....	2,112·02

WM. I. LEWIS,
Civil Engineer.

San Francisco, February 6th, 1856.

While your Committee is fully sensible that many reasons might be adduced, and go far to justify the Directors in increasing the thickness of the walls at its base, a strict regard to the rights of the State imperatively demands that every officer should comply with the provisions of the law under which he acts. To the dangerous precedents and vitiated system so long practiced on our State, in the non-enforcement of the law, is to be attributed mainly the embarrassments under which we are at present laboring.

The work of reform should commence, if we wish the honor of the State sustained. The people are already overburdened with taxation, and your Committee are unwilling to acknowledge a debt unauthorized by law.

In justice, however, to the late Board of Directors, your Committee deem it proper to present the reasons given by Major Love in justification for the digression from the law. He states that lime was used in preference to cement, on account of the superior cementing qualities of lime, one barrel of which he considers equal to two barrels of cement. The wall was extended to prevent filling up a well. The extra thickness was necessary to secure its safety. He also states that the Contractor gained nothing by the changes. With due respect for the judgment and opinion of the Directors, your Committee are of the opinion that the reverse of Major Love's statement is true, believing that cement is infinitely superior to lime in the construction of walls of such character, particularly when the sand used had been overflowed by salt water. Your Committee also think that the wall, as specified by the law, would have been sufficiently thick, had cement been used in its construction, and cannot but believe that the contractors profited largely by the changes. The well mentioned by Major Love could not be found by your Committee, though diligent search was instituted for it.

In order that the discrepancy in the several measurements may be more clearly understood and fully comprehended, your Committee deem it advisable to present the following summary:

Cubic feet of stone certified to by Major Love	204,585
Cubic feet of stone work ascertained by measurement of your Committee	135,304
Difference in cubic feet	69,181
Brick wall, amount certified to by Major Love	1,374,296
Amount ascertained by your Committee from measurement	1,309,605
Difference	64,691

Amount of cubic feet of stone work necessary to complete the wall as required by the law, 110,000 feet.

Excess of wall, as certified to by Major Love, 94,485 feet, which, at 40 cents per foot, the price contracted for, amounts to $37,790.

Amount of brick required by the law, 1,250,000.

Excess of brick, as certified to by Major Love, 121,796, which, at $15 per thousand, amounts to $1,816 94; added to the excess in stone work, makes $39,606 94. Your Committee will state that Major Love's estimate of the brick work was made at twenty-two bricks to the cubic foot, and the estimate of your Committee at twenty-one bricks to the cubic foot; the latter estimate being in the opinion of your Committee the proper estimate.

Your Committee was unable to discover upon what data Major Love based his calculations, which produced the enormous excess above shown; there are no

measurements except those taken by your Committee that have been considered as reliable or correct.

Your Committee further state, that they have made a careful and rigid examination respecting the state and condition of the title to the State Prison grounds claimed by the State, upon which is situated the State Prison wall, and other buildings and improvements appertaining thereto, and find that the tract of land of which the Prison grounds form a part, was originally granted by the Mexican Government to John B. R. Cooper, such tract being known by the name of Corto Madera Pinto de San Quentin Segante, containing two leagues, more or less; which grant has been adjudicated and confirmed by the Commissioners appointed by the United States Government to adjudicate and settle Mexican grants in the State of California.

Your Committee further find recorded in the Recorder's office of Marin County, in which is situate the State Prison and Prison grounds, a deed of conveyance from J. B. R. Cooper, the original grantee, and his wife and daughter, to Benjamin R. Buckelew, conveying to said Buckelew the whole of the two leagues of land above referred to, the consideration named in said deed being $50,000, which conveyance appears to have been fully acknowledged by the grantor before the Recorder of Monterey County, and which was dated 25th of October, 1850, and acknowledged 28th of October, 1850, and recorded in Book of Deeds A, page 15, of Marin County, in Book of Mortgages A, page 2, and following a deed of mortgage executed by Benjamin R. Buckelew to John B. R. Cooper of the whole of the grant or tract of land above referred to, to secure a debt due said Cooper from said Buckelew of $32,500, which mortgage is dated 2d November, 1850, and was duly acknowledged by the mortgagor on the day of its execution, and was recorded in said Book of Mortgages on the 25th day of November, 1850, and that no evidence of the satisfaction or discharge of said mortgage appears on record in the Recorder's office of Marin County; yet, from information coming to the knowledge of your Committee, derived from testimony of reliable witnesses, examined on oath, your Committee are inclined to the belief that the debt, to secure which said mortgage was executed, has been paid off and satisfied in full, but that satisfaction and discharge of said morgage has, through negligence or otherwise, been omitted to be entered in said Recorder's office according to law.

Your Committee further find, recorded in the Recorder's office of Marin County, a deed of conveyance from B. R. Buckelew to the Governor of the State of California for twenty acres of land, being a part or parcel of the Mexican grant of the two leagues of land above referred to; such deed dated 9th of July, 1852, duly acknowledged by the grantor before a Notary Public on the day of its date, consideration named $10,000, recorded in Book A of Deeds, page 143, and following. By this deed, Buckelew covenants on his part to build a wharf connecting with a ship-channel, to a depth of sixteen feet of water, to be used by the State of California, for all purposes connected with the State Prison grounds, free of charge, forever; and by which covenant it was provided, that said wharf was to have been completed and ready for use on or before the 1st of January, 1853; and by which deed the right of way was granted by Buckelew to the State between said wharf and Prison grounds, which covenant, on behalf of said Buckelew, has never been fulfilled and performed according to the terms and meaning of said covenant, but, on the contrary, the said Buckelew has, up to this period, wholly failed and omitted to perform said covenant according to its true intent and meaning.

Your Committee further find, recorded in said County Recorder's office of Marin County, a deed of conveyance from B. R. Buckelew to James M. Estell, Robert Allen, Ferdinand Vassault, Andrew Garr and Joseph Daniels, for about sixteen acres of land adjoining the State Prison grounds, to wit: The thirty acres conveyed

by Buckelew to the State, such deed dated 10th of July, 1852, was duly acknowledged by the grantor on the 14th of same month, before a Notary Public, and was recorded on the 28th of September, 1852, in Book A, page 188, and following; considerations named in deed of conveyance, $5, and divers other considerations and terms to be fulfilled by the grantees.

Your Committee further find, recorded in said County Recorder's office, a deed of conveyance from James M. Estell, Robert Allen, Ferdinand Vassault, Andrew Garr and Joseph Daniels, to the San Francisco Manufacturing Company, for the sixteen acres last above alluded to; consideration named in deed, five dollars, duly acknowledged by grantors, and recorded in said Recorder's office of Marin County.

Your Committee further find, recorded in said County Recorder's office, a deed purporting to have been executed by the San Francisco Manufacturing Company, conveying to Archibald Woods all the right, title and interest, of said Company in the State Prison grounds, and all grounds adjoining and adjacent thereto, and certain personal property and effects specifically described in an invoice annexed to, and made a part of, such conveyance; consideration named in said deed, $30,150; instrument dated 30th of June, 1854, duly acknowledged before a Notary Public, on the 6th day of July, 1854, and recorded in said Recorder's office on the 14th day of July, 1854, in Book A, page 385, and following.

Your Committee will remark, that the deed was executed for, and on behalf of, the San Francisco Manufacturing Company, by James M. Estell, President of said Company; and that no power of Attorney was ever executed by said Company, or the members thereof, and acknowledged and recorded in the manner prescribed by statute for the execution, acknowledgment and record of deeds or instruments affecting real estate, authorizing said Estell, as the Attorney in fact of said San Francisco Manufacturing Company, to execute, on behalf of said Company, said deed of conveyance. We find, however, from an examination of the books containing the proceedings of the Board of Directors of the San Francisco Manufacturing Company, which was submitted to our consideration, that prior to the execution of said deed of conveyance, from James M. Estell, President of said Board of Directors, in behalf of said Company, to said Arch. Woods, a resolution was adopted by said Board of Directors, and entered in said book containing the proceedings of said Board, authorizing said Estell, in behalf of said Company, to make and execute said deed; and we further find, by reference to the proceedings of said Board, subsequent to said resolution of authority, also of record in the Book of Records of said Company, to said Woods, before the same was completed, was duly submitted to the Board of Directors, at a regular meeting thereof; and the same was duly approved by said Board, and such approval duly entered in said Book of Records of the proceedings of said Board; and after the entry thereof of such approval, and at the same meeting of the Board, an order was made and entered at large in said Book of Records, among the proceedings of said Board, directing J. M. Estell to execute, on behalf of the said Company, said deed of conveyance to said Archibald Woods, according to a draft of such deed, submitted and approved.

Your Committee further state, that on the 22d of June, 1854, one Thomas Young commenced an action in the District Court of the 12th Judicial District, in San Francisco, against the San Francisco Manufacturing Company, in which suit a writ of attachment was issued to the Sheriff of Marin County, and was levied by said Sheriff on the 23d of June, 1854, upon the sixteen acres of land sold and conveyed, as before mentioned, by said San Francisco Manufacturing Company to the said Archibald Woods, and afterwards sold by Woods to the State.

In said suit the San Francisco Manufacturing Company, by their attorney, filed their answer in said court on the 5th day of July, 1854; in which court said cause was tried and judgment rendered on the 8th day of December, in favor of plain-

tiff, Young, and against said San Francisco Manufacturing Company for $5,817-89, with interest at two per cent. per month from date of judgment, with costs and disbursements, amounting to $633 84, making the aggregate amount of judgments and costs $6,451 53, which judgment was, on the 20th of March, 1855, assigned by plaintiff to one Mr. Centro; and that on the 4th day of August, 1855, the said sixteen acres of land, attached aforesaid, was sold by the Sheriff of Marin County, under and by virtue of an execution issued upon the judgment out of said District Court for the price or sum of $2,000, the said Centro, the assignee of said judgment being the purchaser; and that the time for the redemption of said property expired on the 24th of February, 1856, without any redemption having been made, from and after which time a Sheriff's deed has been due said Centro for the property. By reference to the deed from the San Francisco Manufacturing Company to Archibald Woods, above referred to, and the writ of attachment in the suit of Young against the San Francisco Manufacturing Company, it is shown that such attachment was levied upon the sixteen acres of land conveyed by said deed, *six days prior* to date of said conveyance, twelve days previous to the acknowledgement, and twenty days prior to the recording of the same in the County Recorder's Office of Marin County. It is the opinion of your Committee that the attachment of Young is perfectly good in every view of the case, as between Young and the San Francisco Manufacturing Company, and create a lien upon said property from the date of the service of said writ, and that the utmost that Woods could claim would be that he was a subsequent *bona fide* purchaser, without notice of Young's attachment, and for a valuable consideration paid by Woods.

Your Committee have not been able to discover any irregularity in the service of said attachment. The Sheriff's return appears to show that the land in question was duly and legally attached, hence your Committee infer that Woods had actual notice of the attachment in the strict sense of the law.

Your Committee further state, that the deed to Woods is, in legal effect, a quitclaim deed; it only purports to convey all the right, title and interest of the San Francisco Manufacturing Company to Woods just as they held, subject to the attachment, consequently, your Committee are of the opinion that Woods took the estate incumbered, just as the grantors held it and not otherwise.

Your Committee further state, that the deed from Woods to the State is likewise a quitclaim deed, consequently she holds this property precisely as Woods did, subject to the lien of the attachment, provided it is, as your Committee believe, a valid lien and without any recourse back upon Woods for the purchase money in case of a failure of title.

EVIDENCE BEFORE COMMITTEE.

TESTIMONY OF W. P. C. STEBBINS.

The figures on the diagram are correct, the measurement was taken as the wall progressed ; the width and depth of the wall is different at a great many places; the measurement is as correct as is possible to make it.

On an average we used two barrels cement to one of lime ; I thought it would make a better wall than all cement.

The price for a good rubble wall per cubic foot, find all the material, is from fifty to sixty cents ; there is a great difference in the price of stone ; the price varies according to size ; also, in the price of work, the size of the stone makes the difference in price.

I think the price paid for the building of the State Prison wall is low ; don't think it could be done for less.

It takes more mortar in laying brickbats than whole brick.

Could build a house for cells, like the one at the Prison, for $60,000 and find the material.

I am a mason and builder ; I superintended the building of the State Prison wall.

It would cost more to lay a wall of this kind, than a small wall in the city ; it takes one-third more mortar ; I make my statement from the price of labor and materials.

The carting of the material for the wall was done by James Smiley ; it is worth fifteen dollars per thousand to lay the brick in the wall.

It cost $3 50 per ton for the sand landed at the Prison ; the mechanics laid 1,500 brick each per day on an average.

It took one and a third tons of sand to 1,000 of brick; lime cost four dollars per 1,000 brick ; labor, four dollars ; cartage, one dollar.

About one hundred convicts were engaged on the work ; the whole of the labor work was done by them ; the proportion of the convict labor to the whole work was about twelve per cent.

I think the wall could be built in San Francisco, find all the material for fifty-five cents ; it is worth five cents more at the Prison.

The lowest price stone can be laid for in San Francisco, is eighteen cents per cubic foot.

TESTIMONY OF R. N. SNOWDEN, (LATE DIRECTOR).

We purchased of Gen. Estell 2,200,000 bricks, on the consideration that we should fill certain contracts that he had at Mare and Bird Islands, for which we agreed to pay $10 per thousand ; we could not fill the contracts with the bricks bought of him, but done so with bricks burnt afterwards, for which Gen. Estell got the money ; the purchase of him was unconditional.

The agreement to purchase the property at the prison of Woods & Estell, was to leave it to referees, neither party to be bound by their decision ; they selected a Mr. Wright, and we Mr. Warner ; they were to make the valuation under oath ; the amount of their valuation amounted to $100,735 ; this amount was not accepted by the Directors ; we notified Woods & Estell that we did not feel authorized to give that amount, but felt authorized to give something near the amount of the bill passed by the last Legislature for his property ; we agreed to give them Controllers' Warrants for all except $11,000, to make up $64,000, which was to be paid in bricks, and the products of prison labor, and agreed to certify the appraisement of property to the Legislature for their action ; he to depend on them for the balance of the $100,735. There is about 800,000 unburnt, and 500,000 burnt bricks on hand ; we talked one time of discontinuing the building of the wall, but a fresh arrival of prisoners decided us to go ahead, even if it did cost more than we thought it ought to, to prevent the escape of the prisoners.

I agreed to leave the whole matter of building the wall to Maj. Love ; he made the contract.

I made a contract with H. Bowie for supplies, which was repudiated, and never fulfilled. The supplies furnished by Mr. Smiley was by order of the Warden, Major Love.

The prisoners excavated the foundation, and quarried the stone used in the wall. I have never received one dollar of the money belonging to the State Prison since I have been a Director.

There were bricks sent to San Francisco and sold; do not know to whom; the excavating was commenced before the contract was given out, but not finished. I do not think the prisoners can be fed and clothed for less than 65 or 70 cents each per day ; we could not make contracts for supplies unless we made warrants equivalent to cash.

Maj. Love and Mr. Palmer selected the referee ; Mr. Warner was recommended by Dr. Ash. I know of no other proposition to contract to build the wall but the one made with Mr. Smiley ; we at first concluded to build the wall by day's labor and convict labor ; on examination found we had but one or two masons in the prison. We had no money on hand, and could not hire mechanics without it.

TESTIMONY OF GEN. ESTELL.

The San Francisco Manufacturing Company failed, and transferred the property to A. Woods and S. W. Haight. When the Directors came down, they found they had nothing to work the prisoners with, or place to work them; they bought the property of the schedule of A. Woods; they paid Woods $47,000, and Estell $7,000; I signed the deed as a matter of form, having no interest in the sale from Woods; I had an interest to the amount of $7,000 of the Island property; I have heard conversation between Cooper & Buckelew, and know the title to the land is clear, from their conversation; all the judgments against the land and material outside of the wall have been paid by A. Woods, and is perfectly clear as far as I know; Woods assumed liabilities to the amount of sixty thousand dollars for the S. F. M. Co.; the property of the Company was transferred to him to secure his advances. The purchase by the Directors was made from him; I acted as agent for him; the brick presses and planing machine cost $20,000.

I don't think the wells could be placed there for $1,000 in scrip. The amount of property on the schedule was agreed to by the referees; this schedule comprises all the property turned over to the State.

There is no legal claim against the property sold by Woods to the State; the only contingency that can arise is the refusal of the United States to confirm the title to the grant. A judgment was obtained against the S. F. M. Co. by a Mr. Young, after the sale to the State.

The guarding, feeding, etc., cost me from fifty-nine to sixty-one cents per day; I think it would cost the State more. I think the prison is located in as good a place as can be found; I employed from twenty to thirty guards.

I proposed last winter to build a wall around the prison, similar to the one built, for $50,000; I never heard of the giving out of the contract until it was made. I think I could have built the wall at the price I proposed, without losing money.

I did not agree to take less than the amount of the schedule for the property, but did agree that all over $64,735 should remain unpaid for the future action of the Legislature. There being no stone to build the wall with, I refused to let them have stone unless they bought the prison brig and materials, which agreement was made, for which I was to receive $7,000.

TESTIMONY OF REUBEN CLARK.

I am an architect; I am well acquainted with the price of building walls. To furnish the mechanical labor, lime, cement and sand, is worth from fifteen to eighteen cents per cubic foot; to build a brick wall ten feet high, two and a half feet thick, furnish lime, sand and bricklayers, is worth $7,50 per thousand bricks; a wall of that thickness can be laid twenty-five per cent. cheaper than a three foot one; it would cost fifty cents more to lay bricks per thousand at the prison.

TESTIMONY OF JOSEPH ATKINSON.

I am a builder ; I am acquainted with the price of work and building. The price for cement has varied very much this year, sometimes it has been very high; the price for laying stone work, furnishing lime, sand, cement, labor and workmen is worth from twenty-eight to thirty cents per cubic foot ; to lay brick and furnish everything except brick, nine dollars per 1,000.

To build a brick wall like the one at the Prison, and furnish lime, sand and bricklayers, is worth $7 50 per 1,000

TESTIMONY OF MAJOR JOHN S. LOVE, (LATE DIRECTOR).

The copy of the original contract with Smiley, is a true copy ; a small portion of the wall was built before the contract with Smiley was made. No other proposition for a contract was submitted or entertained ; I measured the wall as it progressed ; I asked no one the value of constructing the wall except Mr. Smiley.

I met Mr. Smiley on Washington street ; the meeting was accidental, did not know him at the time ; I did not know him previous to making the contract ; I commenced the building of the wall by day's labor ; could not get mechanics to work, on account of the uncertainty of their getting paid ; I had to abandon the building of the wall on that account ; I advised with Mr. Palmer and Mr. Snowden in regard to building it by contract, they agreed to making a contract ; I had a conversation with Mr. Smiley, who agreed to make a contract ; the whole matter was left with me by the other Directors ; I made the contract on file with Mr. Smiley ; no one was interested but himself, to my knowledge.

Had no understanding with Woods or Estell, except expressed in the articles of agreement on file ; my understanding was, that we got possession of everything belonging to Woods and Estell, at the State Prison grounds, as embraced in the schedule ; the amount to be paid was $64,968, they were to take the chance of getting the balance from the State.

The amount was as follows : $37,000 to Woods and Estell's creditors, $13,000 to Estell, $8,000 remained in the hands of the Controller until the title to the land was fully cleared up.

The stone work is of different width and depth, according to the nature of the ground ; we had to make it so to make a good foundation ; the stone is laid in cement and lime ; was advised to do so by contractors and architects to make a better wall.

The Controller refused to draw warrants for the building of the wall or supplies ; do not know that there has been any warrants issued for the work only by hearsay, have never seen any. The captains of the vessels measured the wood that we bought and gave a receipt for it, we paid for it upon the production of this receipt. Mr. Smiley assumed the bills and paid them ; we paid him part in cash and part in Controllers' orders at the rate they were selling, at seventy-five

and eighty cents ; I at one time notified Mr. Smiley that the work would have to stop, as I could not get warrants issued to pay for the work ; a few days after he informed me that he had arrangements to get the money, and would go on and fulfill his contract.

I think it would take another building as large as the present one, with single cells ; also, an addition of a story of single cells to the present one to take care of the convicts as it should be done ; I think it would cost forty cents per day to feed and clothe the prisoners.

TESTIMONY OF DR. TALIAFERRO.

I was employed as physician at the State Prison, from 1st of June to 1st of January ; there was some sickness while I was there, brought on by exposure for want of clothing ; the first commencement of the building of the wall was about the 1st of August ; the treatment of the prisoners, while I was there, was kind.

TESTIMONY OF GOV. PURDY.

There is a great difference in the depth of the wall ; we had to go down to find a good foundation ; I took the measurement of the brick wall ; it is correct ; the price of mechanical labor was much greater than at present. The stone work was computed from the measurement of Mr. Stebbins and Maj. Love, as the wall progressed. I don't know what the work could be done for now.

TESTIMONY OF MR. FOLEY.

I have been supplying provisions for the State Prison, in connection with H. Bowie ; the Directors wanted Bowie to supply at a certain price per day ; Mr. Snowden proposed giving twenty-nine cents ; Bowie agreed to take it at thirty-four cents per day each, which he would not agree to, but made arrangements afterwards in which I was interested, at a certain price for each article, as follows :

Beef, 16⅔ cents per lb.; potatoes, 5⅓ cents per lb.; beans, 15 cents per lb.;

sugar, 18⅔ cents per lb.; coffee, 37½ cents per lb.; syrup, 116⅔ cents per gallon; flour, 18,66⅔ cents per bbl.; payment to be in Warrants at sixty-five cents.

The contract was made by Mr. Snowden for four months; when any of their friends could make a profit off of anything they bought from them; we made on our contract about $2,300; I would supply the prisoners with food at forty-one cents per day.

TESTIMONY OF JAS. SMILEY.

I paid a judgment to Frink & Reynolds for the San Francisco Manufacturing Company, amounting to $5,097. I was introduced to Maj. Love on the corner of Washington and Battery streets; I sought the introduction; I heard that he wanted to make a contract to build a prison wall; I had no previous acquaintance; I was introduced by Mr. Palmer; I made the contract with Maj. Love, the other Directors had nothing to say in it.

I think there is 1,300,000 bricks in the wall; I advanced the money to feed the prisoners and buy wood, so as to complete my contract in time; I advanced $24,000 in cash, for which I have received $32,000 in orders on the Controller; Maj. Love has never received, directly or indirectly, any benefits from the contract made with me.

In my opinion the prisouers cannot be kept for less than fifty cents per day. The thickness of the wall at the base was found necessary for the safety of it; I have heard no complaint about the way the wall was built.

Both Controllers refused to issue warrants for the supply of provisions; I sent the orders for the warrants that I received for the wall by Mr. Cohen. The rock at the Island is worth $3 per ton. I have lost money on the contract; will sell every claim I have for $10,000 less than it cost me. The contract made with Ryckman is higher than we proposed; our contract amounted to fifty-three cents per day, in warrants; I would be willing to furnish food and clothing at seventy-five cents per day each.

TESTIMONY OF A. BRADY.

I was employed as a guard, and officiated as Clerk; I tried to keep a brick account, but there was so much discrepancy in the number sent and receipted for, that I gave it up to Maj. Love.

I know nothing about the contract for building the wall up to the 12th of July; there had been no books kept; know nothing about the transactions before that time. The usual plan for receiving supplies was, Mr. Read receipted for them; there was no provisions received but what was receipted for, and all received that was receipted for. The wood was measured by the Captains of

the boats ; it was bought of several different parties ; could not buy it without paying cash.

There was from sixty to seventy mechanics employed on the wall ; the State boarded them, for which Mr. Smiley was to give the State credit for on his account ; the convicts did no mechanical work on the wall.

TESTIMONY OF MR. DOWLING.

I am a practical builder ; I worked on the State Prison wall ; Mr. Stebbins was foreman ; I was employed as stone mason, bricklayer and to build scaffolding ; the wall was not laid up solid, the points not being filled up with mortar ; it is a very poor built wall ; each man laid 3,000 bricks per day on an average ; the stone wall was built better than the brick wall ; I consider it pretty well built ; the sand in the wall was got from the beach near the Prison, and is salt water sand.

I would have taken the contract to build the wall at eighteen cents per cubic foot ; would have built the terrace wall, the State furnishing the materials, at ten and a half cents per foot ; I would have found the mechanical labor at that ; I would take the contract to lay the brick at three dollars per 1,000, and consider it a good price, the State furnishing all the material ; I worked on the wall seventy-four days ; I am on friendly terms with the contractors ; I do not think the stone wall is more than twenty feet high at the gate.

TESTIMONY OF JOHN MADDEN.

Ques.—Were you appointed a State Prison Director by the late Governor ? if yes, state how long you held that appointment.

Ans.—I was appointed such Director on the 17th of October, 1855, and held the position till January 1st, 1856.

Q.—What time did you arrive at Point San Quentin ?

A.—On the Sunday after my appointment.

Q.—Was the State Prison wall in progress of construction at the time, and if so, how far had its construction progressed ?

A.—The east wall was partially finished ; about 400 feet in length was complete ; so far as stone work was concerned, it was not pointed ; the west wall was finished except the brick work and coping ; it was not pointed ; nor was the gate hung, and the hands were at work mainly on the north and south walls.

Q.—Who was building the wall ?

A.—Mr. James Smiley.

Q.—Was Mr. James Smiley building that wall under a contract ? if so, state

all you know about that contract, either of your own knowledge or from any correct information derived from others.

A.—I first saw the contract on the 5th day of December, 1855, in the office of the Controller of State ; it had attached to it the names of R. N. Snowden, John S. Love, Wm. H. Palmer and James Smiley, as the contracting parties ; I know nothing personally of its execution. About a week or ten days after I went to San Quentin, wishing to ascertain upon what terms Mr. Smiley was proceeding to build the wall ; I inquired of Mr. Snowden, President of the Board, what were the terms of the contract with Mr. Smiley ; in the same conversation, we first spoke of a contract with Mr. Bowie, for provisions ; I requested Mr. Snowden to call a meeting of the Board of Directors to have a definite understanding as to both contracts ; Mr. Snowden informed me that he had never seen or signed the contract with Smiley, and knew nothing of the terms of it. Mr. Snowden promised to call a meeting of the Board ; this conversation occurred on Saturday, and the President promised to call the meeting on the following Wednesday ; he did not do so, and no meeting was then held, nor at any time thereafter until the 22d of December. About the 20th of November, I asked Mr. Smiley who made the contract with him and where it was; he told me that the Directors had all signed it, and that it was at the office in San Francisco ; that he believed Mr. Love's copy was there too ; on the 22d of November, I went to San Francisco ; Mr. Smiley had gone to San Francisco the day I asked for the contract. On the 23d of November, I called on Mr. Smiley at his office in San Francisco, and asked to see the contract; he told me it had been sent to the Prison, and that the copy had also been sent over on the 24th ; I went to the Prison, and on the —— day of November, I asked Mr. Love again for the contract, he told me that he did not have it ; I inquired if Mr. Smiley had not sent it over ; he replied that if he had he (Love) had not seen it ; Mr. Love about that time was going to San Francisco, I requested him to bring the contract over to the Prison, as I desired to see it ; he promised me he would or send it to the Governor ; I replied that I wanted to see it before he sent it to the Governor ; I do not know when Mr. Snowden signed the contract ; on the 22d of November, Mr. Snowden again told me that he had not signed the contract, and the matter came up again on the 23d of November, when he told me that he had authorized Mr. Love to make a contract that would be fair and just, and he would ratify it ; I have never been asked by any one to sign the contract.

Q.—While acting as Director, did you examine the work as it progressed, or the character of the masonry and the quality of the material used? if so, state all you remember in this connection.

A.—Soon after I went to Point San Quentin, I noticed that the stone work, instead of being laid in cement, as the law directed, was laid in a cement mortar; I called Mr. Love's attention to it, and desired that the work should be laid in cement; he said that the work would not be finished, if laid in cement, by the 1st of January, 1856 ; there was no change in the mason work ; the masons who built the wall were employed by Mr. Smiley ; the sand used in mixing the mortar was hauled from the beach near the Prison by the Prison labor, the stone was also hauled by Prison labor, and the prisoners attended the masons generally. The excavations for the foundation of the wall were accomplished by Prison labor.

Q.—Have you any knowledge, from information or otherwise, of the number of cubic feet of stone work in the entire wall of the Prison? state from what place the stone was obtained ; state also who superintended the quarry, the amount of stone sent to the Prison and the character of the mason work.

A.—I have some information on the subject derived from Mr. Conner ; he was employed by the State to superintend the building of the wall before Mr. Smiley

commenced his work, and acted as such superintendent up to the time Mr. Smiley commenced.

According to his (Connor's) statement to me, there were, between 6th and 18th of August, ninety-eight days', labor by masons, employed; during which time there was laid by those masons 16,080 cubic feet of mason work, averaging within a fraction of 165 cubic feet of mason work per mason per day. This labor was performed on a wall 510 feet in length. About 3,000 additional cubic feet of masonry would have raised that portion of the wall to the level upon which the brick was to be laid. When Mr. Smiley commenced, Mr. Connor was employed by the State to superintend the quarry, and acted as such superintendent till the completion of the wall. I have from him a statement of the number of tons quarried from Marin Island and sent by boats of the State to the Prison. There were sixty tons of stone used in the building of the wall, which were obtained in digging the foundations. There was about 100 tons of refuse stone, which were used in the foundation of the wall. The remainder of the stone used in the wall was brought from Marin Island. The amount of stone, according to the account kept by Mr. Connor, and furnished to me by him, was 5,913 tons; the entire amount of stone used in the wall was 6,073 tons. I judge, from the foregoing facts, that there is about 120,000 cubic feet of mason work in the entire wall. The wall above ground can readily be measured, but the mason work below the surface cannot so readily be ascertained by measurement. I do not think the mason work good; I have in my possession a statement copied from the book of Mr. Connor, containing the quantity of stone sent to the Prison each day, and in what boats.

Q.—Did Mr. Smiley have any teams at the Prison?

A.—I do not know that Smiley had any teams at the Prison; one of the cart horses died; then I learned that it belonged to Mr. Stebbins; I always thought the team belonged to the State.

Q.—Do you know anything of an order, or resolution, signed by Messrs. Snowden & Palmer, authorizing John S. Love, on behalf the State, to measure the wall built by Smiley, under contract, and to draw orders on the Controller?

A.—On the 5th of December, on the same day that I saw the contract, I saw such a resolution in the office of the Controller, dated September 1, 1855.

Q.—Did you have any conversation with the other Directors about that resolution? if so, state when, and under what circumstances.

A.—I did; on the 19th day of December I received a notice calling a meeting of the Board of Directors on the 22d; at that meeting I made a motion to rescind so much of the resolution of September 1, as authorized John S. Love to draw orders on the Controller; the Board refused to rescind.

Q.—You state that the masons engaged on the wall were employed by Mr. Smiley; do you mean to say that none of the convicts were employed in building the wall?

A.—I do not know that any were engaged in laying the wall; they worked as mortar-mixers, hod-carriers, stone-haulers, etc.; they did all the work except the actual laying of the stone; and I was informed by Mr. Connor that the prisoners cut and dressed thirty-five tons of stone which was brought from Marin Island and used in the wall; he also informed me that the prisoners cut nearly all the stone used in the east gateway, which is now walled up, and also the dressed stone for the heavy, or south-east, corner.

Q.—You state that Mr. Connor told you that between the 6th and 18th of August, labor equal to the work of a man ninety-eight days was employed, and that during that time 16,080 cubic feet of wall were built, or equal to about 165 feet per day; did you understand Mr. Connor to mean that this amount was con-

structed by the masons, unaided, or did they have the whole force of the prisoners to assist them?

A.—Mr. Connor stated that the prisoners assisted him in the same manner that they afterwards assisted the masons employed by Mr. Smiley.

Q.—Do you know whether 510 feet of the wall, built by Mr. Connor, with the aid of the prisoners, and the ninety-eight days outside labor, was deducted from the gross measurement of the wall before Smiley's accounts were certified to by John S. Love, and audited by the Controller?

A.—I do not know; I have been told that Mr. Smiley assumed the payment of the debts incurred for building that portion of the wall; and suppose, if such is the case, that he has charged the State for the construction of the entire wall.

Q.—You say that you were Secretary of the Board; say when, as such officer, you obtained possession of the books of the Board, and whether you examined each book to ascertain when the wall contract was made, and whether any minute of the contract is entered therein.

A.—I never had the minute-book of the proceedings of the Board; I never saw it; and never saw any entry or memorandum of the wall contract entered in any of the Prison books; never saw anything about it until I saw it in the Controller's office, December 5.

Q.—Did you demand the books?

A.—Yes, but never obtained them.

Q.—Did you know before the scrip for the wall was issued, that it was to be issued? If so, state what you know on the subject.

A.—I was in Sacramento during the latter part of October or early in November, and there heard that an effort was being made to get the scrip issued for the wall; I had a conversation with Gov. Bigler, and told him that I did not think the Controller could audit it; that I had never seen the contract, and Col. Snowden told me he had never signed one, and that under the circumstances I would not certify to the accounts.

Q.—Have you any knowledge of the amount of bricks manufactured by the prisoners between the 1st of June last and the 31st of October? If so, state how many were made, and what became of them.

A.—I only know from information by Mr. Pillow, Deputy Warden, that including the amount on hand when the State officers took the prison from Gen. Estell, the total amount made was 5,000,000, of which number about 1,250,000 were used in the wall, and the remainder were sold, part to Gen. Estell and part to other parties.

Q.—What prices were obtained for those sold?

A.—I do not know; I understood that Gen. Estell credited his claims against the State at the rate of $38 per thousand for those delivered to him at Mare Island.

Q.—When you assumed the duties of your office who furnished the provisions and clothing for the prisoners, and upon what terms were they furnished?

A.—Soon after I went to San Quentin Mr. Snowden informed me that there was a contract with Mr. Bowie; that Mr. Love had authorized him (Mr. S.) to make one, and that he had done so; I asked Mr. Love about it, and he replied that there was no contract, that he had never signed one, nor authorized Mr. Snowden to make one. Some time afterwards I asked him (Mr. S.) why, if there was no contract with Bowie, he received the provisions from him, that I did not know what prices were being charged, and that I was going to San Francisco, and that if he (Mr. S.) would give me authority, I would get bids from different parties, and bring them over and submit them to him, so that we might get them on the best terms; he refused to give me the authority; stated that he would make no contract, and was going to get the provisions as he had been

doing ; provisions were received afterwards from different parties, Bowie, Smiley and Ryckman.

Q.—Did the Board make a contract with any person to supply the prisoners with provisions and clothing ?

A.—At a meeting of the Board, Dec. 22d, the matter of a contract was under discussion, and afterwards, on the 26th, a contract for one year was entered into with Jno. Ryckman, to furnish the prisoners with food and clothing, and the Directors, Overseers and Guards with provisions, for the sum of ninety cents per man, per day, in scrip, at par.

Q.—Why was that contract made ?

A.—The 7th Section of the Prison Act contemplates a contract, and gave us the power to make it, and I thought then, and still think, that the best interests of the State were subserved by the contract.

Q.—What do you know of the books and accounts of the Prison ?

A.—Mr. Reed acted as Commissary, received the provisions, weighed the beef, etc., after which the amounts were entered in a book kept by him.

Q.—Are these books now in possession of the Committee—the books of the Prison ?

A.—No, sir, they are not the originals.

Q.—Did you ever see these books before, or have you any knowledge of them ?

A.—I never saw them before, and know nothing about them.

Q.—What amount of accounts were audited by your Board of Directors ?

A.—I cannot say ; I have signed none except two, amounting to about $10,000, for supplies, and the accounts of persons employed as guards or overseers ; none others have ever been presented to me.

Q.—Are there any accounts still outstanding against the State.

A.—I believe there are still accounts outstanding against the State, but I cannot say whether they are certified to or not, none having been presented to me.

GROSS COST OF PRISON UNDER THE OLD BOARD OF DIRECTORS.

Controller's account		$345,334 88
Jno. S. Love, (cash advanced)		2,270 94
Receipts from bricks		6,222 17
Due J. M. Estell		33,773 25
Due Ham. Bowie		534 77
Due E. Dannell		212 50
Due Sam. Warren		100 50
		$388,449 01
LESS		
Due by W. H. Palmer	$6 00	
" R. N. Snowden	47 50	
" P. S. Brinkerhoff	54 60	
" B. R. Buckelew	16 00	
" J. Warner	46 00	
		170 10
		$388,278 91

FOR THE FOLLOWING ITEMS, VIZ :

State Prison Wall	$180,239 09
Expenses, including provisions, clothing, improvements, armory, and salaries	125,967 14
Cord wood for brick kilns, and firing for prison	17,168 68
Property purchased from J. M. Estell	64,908 00
Total	$388,278 91

GROSS COST OF THE FOLLOWING ITEMS FROM JUNE 1 TO DEC. 31, 1855.

On account of	Improvements	$16,251 05
"	Salaries	43,818 17
"	Provisions	60,649 96
"	Clothing	3,205 60
"	Expenses	1,249 86
"	Armory	792 50
	Total	$125,967 14
Averaging for each month		$17,995 30

STATE PRISON LIST OF BALANCES, DEC. 31, 1855.

8. Property	$64,908 00	1. Controller	$345,334 88
9. Improvements ...	16,251 05	3. John S. Love ...	2,270 94
10. Salaries	43,818 17	15. Bricks	6,222 17
11. Provisions	60,649 96	16. J. M. Estell.....	33,773 25
12. Clothing.....	3,205 60	44. Ham. Bowie	534 77
13. Expenses	1,249 86	86. E. Dannell.....	212 50
14. Cord Wood.....	17,168 68	135. S. Warren	100 00
19. Armory	792 50		
21. W. H. Palmer...	6 00		
22. R. N. Snowden .	47 50		
25. State Prison Wall	180,235 09		
43. P. S. Brinkerhoff.	54 60		
44. B. R. Buckelew..	16 00		
133. J. Warner	46 00		
	$388,449 01		$388,449 01

Point San Quentin, Dec. 31, 1855.

REPORT OF STATE PRISON DIRECTORS.

To the Hon. The State Prison Committee:

GENTLEMEN:

Agreeable to your request, we herewith transmit to you a condensed Report of the Prison and Prison Grounds, as we found them on the first day of January, when we entered on our respective duties, as Directors of said Prison.

We ascertained the number of convicts to be 392, confined in the Prison, with the exception of eighty-five, who are quarrying stone at the Island, and remain on the Prison Ships; the balance, being 317, are confined in the Prison, which has but forty-eight cells and one long room. We are compelled to put four convicts in each cell, and some 125 to 130 in the long room, and as soon as the lease expires for quarrying stone, which will be on the first day of June, we shall have eighty-five more to crowd in the long room, beside the number daily and weekly arriving here from different parts of the State.

It will require two more Prison Buildings of the same size as the present one, to enable us to keep the convicts securely, *and said Buildings are required to be built immediately.*

There will also be required to be built and erected of brick and stone, the following fire-proof buildings, inside of the Prison walls, viz: blacksmith's shop, carpenter's, cabinet-maker's, boot and shoe, tin shop, wheel-wright's, etc., etc. Also, there will be required to be built, officers' quarters, hospital, guard-houses, store-house—as all the buildings enumerated are in a delapidated state, and most of them untenantable in the rainy season. The buildings should be erected with as little delay as possible; and as soon as an appropriation is made they can be commenced at once. The estimate for materials, machinery, tools, working implements, cement, etc., etc., for said buildings, together with the erection of two prisons, will not fall far short of $95,000, and which estimate we think will be ample to meet all expenses in building same, as said buildings can be erected entirely by convict labor.

There will also be required the following amount of funds, to meet the current expenses of the Prison, for the year ending 31st December, 1856, viz:

For Provisions for 465 men, consisting of officers, attaches, guard and prisoners, one year	$100,000
Clothing 450 prisoners, one year	15,000
Wages of officers, employees and guard	90,000
Making	$205,000
To which, add amount required for building, as per previous statement.	95,000
And we have a sum, required for the current year, of	$300,000

The brick manufactured and stone quarried, together with the manufacturing of different articles in the various work-shops the coming year, and sold, will be placed to the credit of the above amount.

All of which is respectfully submitted, by your obd't serv'ts,

F. S. McKENZIE,
E. WILSON.

STATEMENT

Of the Actual Cost for Feeding, Clothing and Guarding Prisoners for the Month, ending January 21st, 1856.

To amount of contractor, A. M. Hay, bill for provisions actually consumed in the month of January, 1856, being for 465 employees, guard and prisoners	$3,567 88
The average cost per day for 465 is 52½ cents.	
To amount of contractor, J. F. McCauly, for beef furnished 465 employees, guard and prisoners, and actually consumed in the month of January, 1856	3,707 08
To amount of contractor, R. Matherson, bill clothing furnished to 450 prisoners in the month of January, 1856.....	1,250 00
The average cost per day for 450 convicts is 8½ cents.	
To amount of wages paid to officers, attaches and guard for the month of January, 1856	7,511 43
Total amount of expenses to 31st January.....	$16,036 39

F. S. McKENZIE,
E. WILSON.

STATEMENT

Of the Actual Indebtedness of the State Prison for Supplies furnished in the month ending January 31st, 1856, being for Provisions, Clothing, Stock, Building Materials, Carpenters' Tools, Blacksmith Shop, Ordnance and Hospital stores, etc., etc.

Stock account, consisting of wheel-barrows, shovels, picks, gear, etc.	$859 08
Building account, consisting of lumber, shingles, carpenters' tools, etc.	998 15
Furniture account, consisting of beds, bedding, chairs, desks, kitchen furniture	511 50
Ordnance account, consisting of gun and blasting powder, lead, caps and shot	184 25
Blacksmith account, consisting of bar iron, steel, tools, etc., etc	643 82
Vessel account, for one boat for Island, cordage, ratlin, tar, paints, oars, etc	566 66
Clothing account, for whole amount of invoice purchased from contractor, R. Matherson, being three months' supply	3,708 00
Stationery account for books, record book, paper, etc	150 00
Hospital account, for drugs and medicines	148 77
Provision account, for flour, sugar, coffee, assorted groceries and beef.	7,474 96
Expense account, for wood, fuel, freight on purchases, incidental articles, etc	386 90
Wages account, for amount of wages due officers, attaches and guard.	7,511 43
Total amount due January 31st, 1856	$23,243 52

F. S. McKENZIE,
E. WILSON.

LIST

Of Officers, Attaches and Guard employed at the State Prison, San Quentin, on the 31st January, 1856, and Compensations to same.

Jan. 1st,	1856,	F. S. McKenzie, Director and Warden	$291 66
"	"	Alex. Bell, " Secretary	291 66
"	"	Ezekiel Wilson, " President	291 66
"	"	J. H. Harris, Physician	208 33
"	"	Leonidas Smith, Dep. Warden	150 00
"	"	M. Scott, Jr., Book-keeper and Dep. Secretary	150 00
"	"	Seth H. Netherbee, Commissary	150 00
"	"	Edward Meredith, Storekeeper	100 00
"	"	G. W. Wells, Captain of Guard	150 00
"	"	C. H. Work, Lieutenant "	100 00
"	"	G. M. Whorter, Dep. Warden at Island	100 00
"	"	Wm. Allison, Supt. Blacksmithing	200 00
"	"	—— Loring, " Brick-making	150 00
"	"	J. S. Lisle, Lieut. of Guard at Island	100 00
"	"	Joseph Conner, Supt. of Quarry	150 00
"	"	George Lee, Captain of sloop "Mariposa"	100 00
11th,	"	George Johnson, " "Marin"	66 66
24th,	"	Thos. Riley, " schooner "Pike County"	26 66
1st,	"	Robert Perry, Overseer in Yard	100 00
"	"	J. M. Gray, " of Vessels	100 00
"	"	G. T. Kimball, " in Yard	100 00
"	"	Horace Bell, " "	100 00
"	"	J. D. Robinson, " Stables	100 00
"	"	W. C. Jorden, Cook to 29th, discharged	93 33
"	"	Michael Burns, Guard	100 00
"	"	J. C. Biffle, "	100 00
"	"	A. C. Rockwell, "	100 00
"	"	John English, "	100 00
"	"	P. R. Smith, "	100 00
31st,	"	H. R. Johnson, "	100 00
1st,	"	A. T. Chatfield, "	100 00
"	"	John Norton, "	100 00
"	"	G. W. Woods, " discharged 31st	100 00
"	"	Lartial Root, "	100 00
"	"	G. Hawley, "	100 00
"	"	Edw. Brenman, "	100 00
"	"	J. H. Conway, "	100 00
"	"	James Conway, "	100 00
"	"	Amory Bell, "	100 00
"	"	Peter Hawley, "	100 00

Jan. 1st, 1856,	George Goslig,	Guard		
" "	G. P. King,	"		$100 00
" "	Joseph Seale,	"		100 00
10th, "	W. H. Caldwell,	"		100 00
1st, "	John P. Egan,	"		70 00
" "	E. P. Bonist,	"		100 00
" "	Tim Rogers,	"		100 00
" "	John Jones,	"		100 00
4th, "	J. Williamson,	"		100 00
" "	Robt. E. Russell,	"		86 00
7th, "	Daniel Perkins,	"		86 00
" "	W. T. Whitiker,	"		80 00
" "	G. W. Gray,	"		80 00
18th, "	G. W. Tucker,	"		80 00
1st, "	John McKenzie,	"		43 33
" "	John Spell,	"		100 00
" "	Thos. Kennelly,	"		100 00
" "	H. C. Young,	"		100 00
27th, "	—— Harvey,	"		100 00
1st, "	Capt. Baldwin,	"		16 66
Discharged Guard, gave orders on Controller				100 00
				798 16
Total amount of Salaries to 31st January				$7,511 43

F. S. McKENZIE,
E. WILSON.

STATEMENT

Of Property in and around the State Prison, collected together by the Directors on the first day of January, 1856.

1 Steam Engine, boiler and machinery.
1 small Steam Engine.
1 schooner "Mariposa."
1 sloop "Pike County."
1 sloop "Marin."
47 head Horses and Mules.
17 yoke Oxen.
3 milch Cows.
1 Heifer.
90 Hogs and Pigs.
6 Saddles and Bridles.
11 set Harness, (requiring repairs.)
11 Carts, (worn.)
3 draft Wagons.
2 Trucks.
Lot Shoemakers' Tools.
1 Plaining Machine and Drill.
10 tons old Iron.
Lot Blacksmiths' Tools and Bar Iron.
8 brick Presses.
1 Turning Lathe and Vice.
1 lot Carpenters' Tools.
82,000 burnt Brick, (common.)
225,540 Brick, shipped to Mare Island.
2 doz Picks and Shovels, (old and worn.)
45 Wheelbarrows, (old and worn.)
2 kilns unburnt Brick, (said to be bad and not fit to burn.)
1 frame Guard House, and Kitchen attached.
1 brick Bakery.
1 Office, for Officers' Quarters.
1 frame Blacksmith's Shop.
1 frame Carpenter's Shop.
1 frame and brick Store-house.
2 small frame houses, (one room each.)
1 frame Building, (used for Stable.)
5 office Chairs, (old and worn.)
1 Center Table.

F. S. McKENZIE,
E. WILSON.

AN ESTIMATE

Of the Expenditures of the State Prison, one year, as shown by Mr. Bell, State Prison Director.

3 Directors, salary for each $3,500 per annum	$10,500
1 Dep. Warden	1,800
1 Captain of the Guard	1,800
1 1st Lieut. "	1,500
1 2d " "	1,200
30 Guards, $100 per month each, $1,200 per annum	36,000
8 Overseers, " " "	9,600
3 Cooks, " " "	3,600
1 Steward, " " "	1,200
1 Physician, per annum	2,500
1 Book-keeper, "	2,000
2 Captains' of Vessels, $1,800 each per annum	3,600
Crew to man two Vessels	2,400
Forage for Animals, $600 per month	7,200
2,000 cords Wood, $8 per cord	16,000
Provisioning 600 Men	180,000
Clothing	1,800
Appropriation for starting Manufactures	20,000
Tools and Implements	2,000
Total	$329,700

ALEX. BELL,
State Prison Director.

Your Committee having thus examined and gone through with all the testimony and evidence procured from every source that your Committee think important and deem as reliable, and therefore worthy the consideration of the Legislature.

On the one side stands the State of California, and on the other sundry individuals, who have heavy demands against the State for services alleged to have been rendered. The facts as ascertained by the investigations of your Committee, and the testimony elicited from various persons of undoubted veracity, under oath, must be the guide for future action and legislation in regard to the rights of those persons and the government of the State Prison.

While your Committee cannot recommend open repudiation in the payment of the aforesaid demands against the State, your Committee do recommend that the contracts for supplies and the building of the Prison wall, and the enormous excesses committed, and the authority of the State agents in assuming the power, and arrogating to themselves the right to depart from the strict provisions of the law—be placed under the strictest scrutiny. The pride and honor of the State, and the credit and confidence we should seek to establish in the world, would at once forbid in our State,—as it should in every sovereign State of the Union,—repudiation, in the payment of any reasonable sum of money arising under a contingent necessity.

From the testimony above, particularly that of Mr. Madden, who was himself one of the late Board of Directors, there is *prima facie* evidence of fraud: whether arising from the inability of those gentlemen to discharge their duty, or an intentional abuse of power and waste of public money. The State has for years been blindly lavish in conferring wide discretionary power upon irresponsible men, who have taken every advantage in favoring pet schemes, and pledging the faith of the State to all sorts of one-sided contracts and obligations. It is not the desire of your Committee to charge corruption or fraud upon any person who has held responsible positions under the late government; but from the context of the proceedings of those who had charge of the State Prison, there are, beyond all question, some grounds for suspicion of those who were placed in charge of that institution.

Your Committee would recommend, for the purpose of ascertaining the peculiar character and validity of those heavy claims and demands created against the State, on behalf of, and incurred for, the support and maintenance of the State Prison, together with all the accounts and contracts, and every species of claim, be submitted to the Attorney-General of the State; and that a resolution be passed, authorizing and requiring him to examine into all claims, and the legal right of those claims, and persons; and further, that he be empowered to commence suit against any, and all, of the late Board of Directors, in any Court of Justice in this State having jurisdiction of the same; and that he be further authorized to prosecute the said Board of Directors, their bondsmen, or other sureties, for damages, for any, and all, losses that the State may have sustained by means of neglect, or irregular and informal proceedings in office.

Your Committee have also ascertained the valuation of such labor and material as was necessary to construct the stone and brick wall around the Prison, as the testimony above will show, which fixes the price of the stone work at twenty-eight cents per cubic foot, and brick work at ten dollars per thousand, which your Committee believe are the highest prices paid for such work. From these facts it will appear, that had the Directors contracted for the construction of the wall, as the law authorizing its construction prescribed, and at the market value of such work, the whole cost would not have exceeded the following amount:

Stone Work, 110,000 cubic feet, at 28 cents per foot	$30,000
Brick, 1,250,000, at $10 per 1,000	12,500
Coping, 2,000 feet, at $9 per foot, line measurement, including setting.	18,000
One Iron Gate	500
Total	$61,800

The above prices are higher than was stated by practical builders and contractors examined by your Committee.

In comparing the above, with the amount and measurement as certified to by Maj. Love, the following difference in cost will appear :

Stone Work, allowed by Maj. Love, was 204,485 feet, at 40 cents per foot as per contract	$81,794 00	
The amount, as the law directs, is 110,000 feet, at 28 cents per foot	30,800 00	
Excess		$50,994 00
Brick Work, Maj. Love's measurement, 1,374,296, at $15 per 1,000	$20,514 44	
As the law directs, 1·250,000, at $10 per 1,000	12,500 00	
Excess		$8,014 44
Amount certified to by Maj. Love for Stone Coping, Gate, etc	$24,692 00	
Valuations by Committee	18,500 00	
Excess		$6,192 00

RECAPITULATION.

Cost of wall as certified by John Love—		
Stone Work	$81,794 00	
Brick Work	20,514 00	
Coping, Gate, etc	24,692 00	
Total		$127,000 00
As per measurement and valuation of your Committee—		
Stone Work	$30,800 00	
Brick Work	12,500 00	
Stone, Coping and Iron Gate	18,500 00	
Total		$61,800 00
Excess of cost found		$65,200 00

From the above statement it appears that the Contractor has been overpaid in the sum of $65,200, and from the books of the Directors it appears also that the Contractor still holds certified accounts to the amount of eighty thousand dollars, which accounts have not been audited; $32,000 of this amount is for supplies, alleged to have been furnished to the Prison, and $48,000 certified to by the Directors for the purpose of indemnifying the Contractor against loss by the depreciation of State Scrip. The total amount outstanding against the State, as shown by the books of the Directors and the report of the State Controller, is $128,-244 66. The Directors, it appears, voluntarily and without the color of authority, certified to this sum of $48,000, or thirty per cent. in addition to the amount certified in the contract.

Your Committee is clearly of the opinion, that this amount was not only illegally certified to, but was wholly unauthorized, as will appear from the following extract from the Contract with Mr. Smiley:

"For and in consideration of all which by said party of the second part, the said party of the first, agrees to pay to said party of the second part, forty cents per cubic foot for the stone laid in the wall; said stone-work to be measured at the end of every two weeks, and a certificate of the amount given to the party of the second part, and orders drawn by the Wardens, parties of the first part, on the State Treasury for the amount; the State to appoint its own Superintendent, and to measure the same."

It is clear from the terms of the above contract, that an additional sum was not contemplated when the contract was made; by reference, however, to the character of the claims and demands set up against the State by the Contractors, it does appear that it has been done in every instance.

The amount paid for wood, or certified to by John S. Love, is $17,168, and the whole amount of brick burnt with said amount of wood, could not have been sold for more than $20,000.

Your Committee being unable to obtain the original books of the Prison, which was withheld from the Committee for reasons unknown, except for the reason as stated by Maj. Love, that there was so much error and irregularity in the manner of keeping them, that he deemed it essential to have a correct copy made, which copies were the only books presented to your Committee. Mr. Brady, who was employed for some time as clerk, states the same thing.

The report made by the present Board of Directors, shows the expenses of the State Prison, for the month of January, to be $23,243 52. At this rate, it will require an appropriation of $250,000 annually to support the Prison and defray its expenses. The Board, however, widely differ on this point, as Mr. Bell, one of the present Directors, estimates the cost of the Prison for the ensuing year, at $329,700. In addition to the foregoing amount, there will have to be an expenditure of at least $100,000 for the erection of buildings necessary to contain the prisoners.

The lease between James M. Estell and the State, for Marin Island, expires on the 1st day of June, 1856; and unless there be some some provision made by the State, there will be no place to confine the prisoners at present employed therein, amounting to about one hundred.

The present building at San Quentin is already filled to its utmost capacity, there being now four convicts in each cell, and about one hundred and fifty thrown together in one room.

From all the facts, as set forth in the above report, it would seem that the most advisable course for the State to pursue, is again to revert to the contract, or leasing, system, upon the most reasonable terms, and to the most responsible person, or persons. The State will thus know how much will be required for the actual

support and maintenance of the State Prison, and when her expenditures will cease.

REMOVAL.

Your Committee have had under consideration the advantage and disadvantage attending the present location of the State Prison. If the Prison had not been built, and they had been charged with a commission to select a location, they would not have selected the present site; but considering the amount already expended, we would not feel justified in recommending a removal. Experience has already taught us, that outlays in starting new enterprises are enormous; and until the number of prisoners become so large as to require to be separated, your Committee are of opinion that the State should confine her expenditures to the present locations.

JNO. B. McGEE, Chairman,
S. BYNUM,
CHAS. WESTMORLAND,
Senate Committee.

E. J. CURTIS, Chairman,
JOSEPH WINSTON,
GEORGE PECK,
BENJ. G. WEIR,
JAMES GEORGE,
GEORGE H. RHODES,
House Committee.

IN SENATE.] [SESSION OF 1856.

REPORT

OF

JOINT COMMITTEE

OF

SENATE AND ASSEMBLY,

APPOINTED TO

EXAMINE THE BOOKS AND PAPERS OF THE LATE STATE TREASURER.

JAMES ALLEN, STATE PRINTER.

REPORT.

To the Senate and Assembly:

Your Joint Committee, appointed to examine the books and accounts of the State Treasurer, Hon. S. A. McMeans, would report:

Upon an examination of the books which had been kept in the office, we ascertained that it would be impossible for us to give them the attention necessary to make a report ere the close of the session. An accountant was employed as Clerk to the Committee, whose investigation has been thorough, and his report to us of the accounts, made in accordance with our instructions, exhibits the full transactions of the Treasurer's Office during the term of Dr. McMeans. By our direction, the discrepancies between the books and reports have been entered in the Schedule accompanying the account, and is clear and comprehensive.

The "Act concerning the office of State Treasurer," passed January twenty-four, 1850, section four, reads: "He shall receive and keep all moneys of the State not expressly required by law to be received and kept by some other person; shall disburse the public moneys upon warrants drawn upon the treasury, according to law, and not otherwise; and shall keep a just, true, and comprehensive account of all moneys received and disbursed," etc.

This last requirement of the law has not been complied with. The most important book of the office, the Ledger, which should show at a glance the condition of every fund, having been entirely omitted for one year. A Journal, which should give the minutiæ of entries made upon the Ledger, was also omitted for eleven months. And further, the books that have been kept, do not contain the full exhibit of business transacted during those periods.

The duties and labor to keep correct accounts in this office are of the simplest kind. With exception of the water lot receipts, up to May twenty-four 1855, all revenue went through the Controller's Office, who directed the fund and the amount to be credited. The disbursements are almost wholly upon orders of the Controller, which if lawfully drawn, specify the fund from which they are to be paid.

Your Committee can see no reason why the accounts should not have been kept with system and precision.

From the account we submit, we report a deficiency of vouchers of disbursements amounting to $20,449 41, which is unexplained by the Treasurer, whom we have afforded every opportunity for that purpose. In addition to this are the following amounts, which with the evidence we have before us, require further investigation, and if no further light can be thrown upon them they will be properly chargeable as deficits against the Treasurer:

First. The amount of "Treasurer's returned Receipts" omitted in the account we present, is $29,689 92. Of this amount from the evidence we have, $25,748 was an actual receipt, and if not accounted for satisfactorily will enter, in addition, to the general deficit.

Second. The amount paid Messrs. Selover & Sinton in December, 1855, $31,300, from the evidence now before us, was a payment upon a claim without foundation in law or equity, and if no further light can be thrown upon the transaction than we have, when further investigated, then this amount will be an additional deficit to the others above specified.

Third. In this order, the entry of amount of exchange paid Palmer, Cook & Co. as a credit, will be mentioned, and explanation given.

I. TREASURER'S RECEIPTS RETURNED.

By the Act of May eighteen, 1853, the State provided for the sale of water lots in San Francisco.

Section eleven "requires the proceeds of these sales to be paid the State Treasurer, whose duty it was to attend and receive it. Section seven states the terms of the sales to be ten per cent. down, twenty-five per cent. in ten days thereafter, and sixty-five per cent. in three months. In default of the full payment the property to be resold at purchasers' expense, and for their account. Section eight provides that the Land Commissioners shall execute deeds to purchasers when the terms of the sale are complied with.

The evidence in this case is, that a portion of the above amount of receipts are those given by Major Roman, former State Treasurer, to purchasers, said receipts specifying the numbers or boundaries of lots. If the amount received by Major Roman was in full payment, the purchaser could procure conveyances of the lots from the Land Commissioners on a surrender of the receipt.

Between January and July, 1854, parties unknown, or not recollected by Dr. McMeans, presented some of Major Roman's receipts, for lots purchased at sales in 1853, and asked that they might be taken as so much cash, upon other property. It being *prima facie* evidence by the parties holding the receipts, that the money had been paid, and that no deeds had ever issued, they were taken as cash, and Dr. McMeans' receipts for equal amounts were given specifying other property, which receipts, if they were for full payment upon such other purchases, would enable the holders to obtain conveyances. In order to show the full transactions of his office, these receipts of Major Roman, taken as cash, were entered as a receipt in the annual report, and the same amount credited. The books do not show anything regarding it, and the above is the explanation of Dr. McMeans to the Committee, corroborated by Mr. Gift's statement, which will be seen by reference to Appendix No. 2, together with a copy of Major Love's receipt. In March, 1855, Major Love, one of the Land Commissioners, to enable him to adjust the books of the Commissioners, borrows these receipts of Major Roman's, which had been taken by Dr. McMeans as cash, and gives his receipt and obligation to return them when required, a copy of which is given, as before mentioned. The affidavit of Dr. McMeans, (see Appendix No. 8,) states he has been unable to get the originals. Major Love on retiring from office, in May, 1855, surrendered all the papers held by the old, to the new Board.

Were this all the evidence, it would show a complication of the Land Commissioners' accounts, and a method by which parties could obtain by fraud, deeds to lands with one receipt, twice or more times.

But your attention is called to two of the items included in the receipt signed by Major Love, viz:

Selover & Sinton	$2,748
Palmer, Cook & Co	23,000
	$25,748

The correctness of these payments are vouched by the following entries of credit on Major Roman's books:

December twenty-eight, 1853, R. H. Sinton	$2,748
" " " Palmer, Cook & Co	23,000
	$25,748

To ascertain if deeds had been issued on account of above receipts, the Land Commissioners' books were referred to, and a transcript of account of Palmer, Cook & Co., as entered in two Ledgers, is given. See Appendix No. 5—

Which exhibits that on December. twenty-eight, 1853, they are charged with purchase of lots numbers twenty-two, twenty-three, twenty-four, thirty-four	$30,875
And credited December thirty-one, 1853, amount paid Treasurer	$25,748
" March twenty-one, 1854, " "	5,137
	$30,875

At the foot of these Ledger entries is written, "These lots deeded to J. C. Palmer."

The other items in Major Love's receipt could not be definitely traced upon the books of the Land Commissioners. These, however, show that deeds were *once* issued on two of Major Roman's receipts, which were taken subsequently by Dr. McMeans as cash, and for which his receipt for the same amount, substituting other property, was issued, and was good for the procuring of deeds if the amount covered a full payment. We have no evidence before us to show that deeds *were* issued on the receipts given by Dr. McMeans, and the investigation of the Land Commissioners' books and records only will show it.

How came these receipts out of the possession of the Land Commissioners after they had once satisfied them by issuance of deeds? If by fraud, and not carelessness, then they are exonerated, and it is due those gentlemen composing the old Board, that the matter be sifted and fully explained.

Had the Treasurer the right to exchange receipts in this manner? If he had, either with or without the consent of the Land Commissioners, no blame can attach to him, and the amount of loss would fall upon the State. If he had not the right to receive them, and the fact of the issuance of deeds upon Maj. Roman's receipts is substantiated upon a further investigation, then it is the opinion of your Committee that Dr. McMeans is responsible to the State for the amount of $25,748, and any other portion of the receipts specified that may be found to be of the same character.

Two of the items specified in the aforesaid receipt given by Maj. Love, we know are of a different character, viz: that for $433 50 and $5 07, issued by Dr. McMeans.

For a complete understanding of their nature, we will cite an example:

A party purchases a lot for $5,000. The first installment of ten per cent., to be paid the day of sale, would be $500; the warrants or bond given in payment,

might be $560. The Treasurer, to make the change, gives his receipt for the $500, also one for $60—or one for $560—specifying that the holder is entitled to a credit of the overplus of $60 upon the second installment. To make the Treasurer's books balance it would be necessary to debit the full amount received, and credit the amount of his receipt returned for the surplus; and when the second installment was paid, he would debit the full amount, including the $60. But suppose no other payments were made afterward, the credit of the $60 would be an error, as he had the full amount paid, and his receipt outstanding would be good only for payment upon property.

As two of these "returned receipts" are clearly defined, the other four may be found on examination to be just credits upon the full amount.

As the object of the first payment on the day of sale was to bind the purchasers, your Committee can but commend the course of the Treasurer in thus securing to the State the benefit of all the revenue possible from these sales; for if purchasers failed to complete their purchase stipulations, the State was benefitted and the Land Commissioners would have a lesser amount to sue for and recover.

II. The account rendered has entered as a credit, the sum of $31,300 (Item T.), cash paid Messrs. Selover & Sinton for moneys alleged to have been overpaid by them on account of sales of water lots.

Appendix No. 6, contains a communication to the Committee from Dr. McMeans, and his statement is as follows:

"Messrs. Selover & Sinton were the State Auctioneers for sale of Water Lots, and in their private capacity acted as agents for parties, to forward moneys to the State Treasurer and procure deeds from the Commissioners. At various times, amounts were sent, and receipts of Treasurer returned therefor, which amounts received would be entered upon the books. It became necessary to aggregate the whole of these lesser receipts into one, at times, as in this instance: Messrs. Selover & Sinton advanced the sum of $31,300 in all, and the parties for whom they acted as agents failing to reimburse them, they claimed the return of the amount paid."

Your attention is called to (Appendix No. 4) a copy of the State Treasurer's receipt for $31,300 Controller's Warrants, dated Oct. 30, 1854, specifying it was received on account of water lot sales, made Oct. 26, 1854, four days prior.

Also to a copy of Messrs. Selover & Sinton's receipt to State Treasurer, for $31,300 refunded on account of amount due them upon final settlement, for moneys received for sales of water lots and overpaid State Treasurer, in the year 1854 and January, 1855

As this receipt of the Treasurer for the warrants is the evidence of the money having been received from Messrs. Selover & Sinton, and for the cancellation of which the money was returned, it will be observed it is given for proceeds of sales Oct. 26, 1854, and the smaller receipts for which this was given must have been for sales the same date. The Redemption Warrant Register has no entries from Oct. 17, 1854, until Nov. 1, 1854, at which last date there is entered as received from C. K. Garrison warrants for State property to amount of $48,183 64.

The receipt given by Messrs. Selover & Sinton, however, specifies that the overpayment was in the year 1854, and January, 1855.

There are none of the small receipts canceled by issue of the larger one on hand, nor entries upon the books of small amounts received between Oct. 26 and Oct. 30, 1854.

Granting the statement to be correct that this amount was paid on account of sales of land, by Messrs. Selover & Sinton, as agents for others—that the Treasurer issued his receipt therefor, and credited the State with the amount;—if parties failed to pay the balance of purchase money, the Land Commissioners, under

the law, were required to sue and recover the amount due and unpaid. The Treasurer having receipted for the amount and passed it to the credit of the State, could not refund, except in conformity with law.

Section one of an Act of the Legislature approved March 27, 1855, entitled "An Act concerning the offices of Controller and Treasurer of State," reads as follows:

"From and after the passage of this Act, it shall not be lawful for the Treasurer of State to receive or pay out any moneys, bonds, warrants, or other evidences of indebtedness, in full or part payment of any State dues or indebtedness, except upon and in conformity with the order of the Controller of State."

This payment to Messrs. Selover & Sinton was made Dec. 29th, 1855, without an order or the knowledge of the Controller,—fourteen months after its receipt,—in direct violation of law, and overdrawing the General Fund, $21,078 33.

The Treasurer's explanation of the reason for its refunding is, that it was paid by them as agents, that they held his receipt for the amount and could sue him upon his bond to recover it, whereas if it was improperly returned to them, the State would be obliged to sue them for it.

Your Committee would report upon this, that if on further investigation, it shall be found the above statements are correct, and no other explanation more satisfactory can be made,—that the Treasurer had no right to return this amount, having received it in due and legitimate manner, and that if it was a proper and just claim of Messrs. Selover & Sinton, the course pursued in its payment was in direct violation of law, and that the Treasurer is responsible to the State for the full amount. From the evidence before us, it is our opinion, also, that Messrs. Selover & Sinton had no claim upon the State or the Treasurer, either in law or equity.

III. On December 15, 1855, the Treasurer paid Messrs. Palmer, Cook & Co., $15,270 96 for exchange upon the order and paper, a copy of which is herewith submitted. (See Appendix No. 3.)

Of the amount upon which exchange was paid, there was forwarded from 1852 to 1854—

By Major Roman, State Treasurer		$227,300 33
By Dr. McMeans, "	1854 to 1856	371,707 67
		$590,008 00

No contract or agreement between Major Roman and Palmer, Cook & Co. is on file among the papers in our possession showing an obligation to pay exchange. The contracts and agreements of Dr. McMeans with Palmer, Cook & Co. are concise and explicitly drawn for each amount forwarded during his term of office. Only one specifies that exchange shall be paid, viz: that for the remittance of $110,300, to meet the principal and interest of bonds falling due in New York, March 1, 1855, agreeing to pay three per cent. on the amount. The others specify, that in event the amount paid them should not be sufficient to meet the interest called for in full, they shall advance the sum necessary and receive interest thereon at the rate of ten per cent. per annum until reimbursed.

In absence of any specific contract to pay this amount, that your Committee have been able to find, we will recite the power conferred upon the Treasurer to forward moneys.

Section tenth of "An Act to Fund the Debt of the State," passed April 29th, 1851, gives the Treasurer power to make such contracts and arrangements for the payment of interest as would be necessary to preserve the faith and credit of the

State should the Interest or General Fund, or both, prove insufficient to supply the demand at the time needed; also to make the arrangements sixty days before the amount falls due.

No evidence can be found that there was a necessity to go outside of the Treasury for funds during Dr. McMeans term of office.

The money was paid upon an order of the Controller, annexed to an account current, and not in form of a warrant specifying the fund out of which it should be paid.

Section two, amending section six of "An Act concerning the Office of Controller," passed April 13th, 1854, says: "He shall draw all the warrants upon the Treasury for money, and each warrant shall express in the body thereof, the particular fund out of which the same is to be paid; and he shall also indorse upon each warrant, by him so drawn, the specific appropriation applicable to the payment of the same, except only in cases otherwise specially provided by law, and no warrant shall be drawn on the Treasury except there be an unexhausted specific appropriation by law to meet the same."

If the money paid out can be construed as interest, the Treasurer had power to pay it without an order of the Controller. If it was for other than interest, your Committee are of opinion that the "order" for its payment was insufficient authority to the Treasurer; also, that the Controller after auditing the account, should and could only have drawn a Controllers' Warrant upon an appropriation for that purpose, and specifying the fund from which the same should be paid.

The amount paid was drawn from the Sinking Fund, which is set apart for the redemption of bonds. Appendix No. 7, is a copy of an affidavit of Dr. McMeans stating the Controller informed him the order was a sufficient voucher for the payment of the money.

IV. There is no open account upon the books with Messrs. Palmer, Cook & Co. as agents of the State, charging them with funds for remittance, and crediting them with vouchers returned. Appendix No. 1, is a copy of an account rendered by them to State Treasurer, October 30th, 1854, and balance to that date. Also a statement of the account current with them from that time to the 31st o December, 1855, as taken from receipts and letters on file, showing a balance o $151,949 39, for which vouchers have not yet been returned. This account is kept only by the State Treasurer; the vouchers that have been returned are entered in coupon books made for that purpose.

V. The Schedule, Item R, explains the nature of claim against Adams & Co. or their assignees. The money having been lost by their default as common carriers, they are liable for the full amount. By letters on file, it is shown Dr. McMeans made claim for the amount to the old board of assignees, who replied they would inquire into it and report to him, since which time nothing has been heard or done about it.

Your Committee recommend that the evidence in this case be gathered by the Controller, and with a claim for the full amount be laid before the "Referee" or proper parties for payment in full, $6,279.

From our examination of the books and accounts kept in this office, we report gross negligence on the part of the Treasurer, in omitting to keep a systematic, full and correct set of books, for which there is no valid reason assigned or that can be given, and we are satisfied a correct and full set of books cannot be made out in less than six months.

To secure the amount which we report as a deficit, and the other amounts, which, on a further investigation, may be more clearly proved as additional deficits, it is necessary that the books shall be written up, and the time and place of

the deficiency be shown upon them, for the reason, that the Treasurer filed three security bonds at various dates, the last two releasing the sureties upon the first, from and after their respective dates. No action could be taken to recover any amount found due without such evidence.

The result of this investigation shows, from the books, accounts and reports kept, which we have had before us, that there is an unexplained deficiency of vouchers for disbursements of $20,449 41, which, if on a final settlement, the Treasurer cannot supply, will be due the State.

Also, the amount of $25,748, not entered in the account of "Treasurer's Receipts," received as cash if proven to be as stated by us, and the Treasurer was not authorized to receive them, will be an additional deficit to the above.

Also, the amount paid Messrs. Selover & Sinton, $31,300, if proven to be as stated by us, will be an additional deficiency to both the above.

We recommend that the present State Treasurer be requested to open an account with Messrs. Palmer, Cook & Co., and settle with them for the balance due on interest account in vouchers.

The Committee would finally recommend that a Commissioner be appointed, with power to send for persons and papers, whose duty it shall be to make up a full and complete set of books, gather all the evidence relating to the various transactions mentioned in this report, sustained by affidavits, and report to the Governor, to be by him transmitted to the Legislature at its next session. This course is imperatively required, that equal and exact justice be done to Dr. McMeans, the other parties mentioned and the State.

All of which is respectfully submitted.

D. R. ASHLEY, Chairman.
E. F. BURTON,
Senate Committee.

THOMAS J. OXLEY, Chairman.
W. H. TAYLOR,
DANIEL DUSTIN,
Assembly Committee.

Sacramento, March 31st, 1856.

REPORT

OF

CLERK OF JOINT COMMITTEE.

REPORT.

Sacramento, March 28, 1856.

Messrs. Ashley, Burton, Oxley, Taylor & Dustin,
Special Joint Committee of the Legislature:

Gentlemen:

In accordance with your instructions, I have made a searching and thorough examination of the condition of the books and accounts of S. A. McMeans, late State Treasurer, embracing the transactions from January, 1854, to January, 1856.

Neither a full and complete set of books have been kept, nor a definite system followed. It is impossible to make up a correct Ledger account, showing the receipts and expenditures under each fund, with names and dates, in season to report to you prior to the adjournment of the Legislature, as the receipts are but partially entered upon the books, and the vouchers of disbursements are so mixed up in the various books, it would be two months' labor to separate them. The books kept have been—

A Journal and a Cash Book, from January, 1854, to February, 1855—13 mos.;
A Ledger for the month of January, 1854;
A Ledger and Cash Book combined, from February, 1855, to January, 1856—11 months;
An Issue and Redemption Register, for the whole term.

Those omitted to be kept, and necessary to complete a set, are—

A Ledger, from Feb. 1, 1854, to Feb. 1, 1855.
A Journal, from Feb. 1, 1855, to Jan. 1, 1856.

The receipts paid in upon Controllers' orders, in cash and in warrants, are sometimes both entered upon the cash account; at others, the cash only, the warrants being placed upon the Redemption Book. The receipts in bonds are in part entered—not posted, as there was no Ledger—and are in part entered on the Redemption Book.

In April, 1855, Messrs. Kendall and Wells, a committee appointed by the Legislature for the purpose, entered upon a record book warrants and bonds paid by the Treasurer to that date, and canceled them by burning. As these entries do not compare in order of entry with the Redemption Register, and do not specify

the various funds upon which said warrants were drawn, I could not, in the time allowed, dissect each item to make out the Ledger, but corrected the entries by the Issue Register of the Controller and the footings made by the Committee, and gave credit for the full amount in the general account.

The Governor and Controller, by virtue of law, at three different dates, also canceled by burning the bonds redeemed and at the time on hand, also the $700,000 of warrants received for the issue of bonds, under Act of 1855. Of these amounts destroyed, the Redemption Warrant Register does not show the full amount of warrants, neither the Bond Register of bonds. Two hundred and fifteen bonds paid in New York by Palmer, Cook & Co. in March last, and thirteen paid by Dr. McMeans, are not entered; neither can I find any record of their numbers or date. I have given credit in the General Account for the amount of receipts signed by the above, for bonds paid by the State Treasurer.

The Cash Account, as kept in the office, balances in itself; but as it does not contain the full transactions by a large amount—and the book entries and the annual and special reports differing from each other—I have been forced to make up a "General Account," entering in gross the receipts ascertained from the books (except the item of Water Lot Property), and from the receipts filed in the Controller's office. In a Schedule accompanying the General Account, I have given in detail the discrepancies between the books and reports, especially upon the matter of water lots, and the way the amount charged in the account was derived. I have credited the Treasurer with every item of credit that could be found either on books, registers or reports, and have made diligent search for other evidences. The amount entered is all I have been able to find. The war debt and funding of outstanding war warrants being separate from the above, I have not examined. The warrants received for other funded bonds, not being kept separate, I have brought them into the account necessarily.

In the receipts on account of water lots (State property) entered in the account, I have omitted an amount ($29,689 97) which was reported by the Treasurer as a receipt in his annual reports to the Legislature, but the account balanced by charging off the same amount. As this is in dispute, I have left it out entirely, so that the deficit shown has no connection with it.

The Schedule accompanying explains each item.

RECEIPTS INTO THE STATE TREASURY,

From January, 1854, *to January*, 1856.

A.	Balance received from Maj. Roman, (late Treasurer)		$176,850 71
B.	Amount paid through Controllers' orders, for which Treasurers' receipts were filed—		
	Cash	$1,249,236 97	
	Warrants	247,048 35	
			1,496,285 32
C.	Amount received for sale of water lots (State property), exclusive of the $29,689 97 in dispute.....		375,997 80
D.	Amount Land Warrants issued, for which Controllers' Warrants were received		640 00

E.	Amount Bonds issued under Act of 1851	$1,000 00	
	" " " " 1852	800 00	
	" State Prison Bonds issued	8,500 00	
	" Bonds issued under Act of 1855	700,000 00	
			$710,300 00
F.	Amount Treasurer's certificates of balance, issued viz:		
	From January, 1854, to July, 1854	$6,926 40	
	From July, 1854, to July, 1855	36,574 98	
	From July, 1855, to January, 1856	5,374 59	
			48,875 97
G.	Discount on Bonds redeemed from the Sinking Fund—bids below par		929 11
	Total receipts		$2,809,901 78

EXPENDITURES, INCLUDING WARRANTS RECEIVED FOR BONDS ISSUED.

H.	Sundries, as per Record Book of Legislative Committee, viz:		
	Warrants and certificates of balance—funds unspecified—		$1,017,516 14
	Warrants on School Fund		90,690 01
	35 Bonds (Act 1851), $500 each		17,500 00
	2 Temporary State Loan Bonds		325 00
I.	Sundries receipted for by Governor and Controller, vouchers burned, viz:		
	136 Bonds (Act 1851), $500 each	$68,000 00	
	27 Bonds (Act 1852), $1,000 each	27,000 00	
	9 Bonds (Act 1852), $500 each	4,500 00	
	55 State Prison Bonds, $500 each	27,500 00	
	13 Bonds, 1851, $500 each	6,500 00	
	Warrants for Bonds of 1555	700,000 00	
			833,500 00
J.	Sundries, vouchers on hand, viz:		
	Warrants and certificates of balance	$362,697 32	
	13 State Prison Bonds	6,500 00	
	1 Bond (Act 1851)	500 00	
	353 coupons of Interest paid	3,440 30	
			373,137 62
K.	Receipts of Palmer, Cook & Co., for moneys to pay principal and interest of Bonds in New York		371,707 67
L.	Dr. Bates', (present Treasurer,) receipt for balance handed over by Dr. McMeans		30,149 01
M.	Loss on gold dust paid in by County Treasurers		730 07
N.	Interest paid on Temporary State Loan Bonds redeemed		476 85
O.	Interest paid on Bonds redeemed from Sinking Fund		682 90

P.	Interest allowed on Bonds received for State property.....	$155 84
Q.	Bill, *Alta California*, advertising for bids to surrender Bonds.	32 00
R.	Amount lost by Adams & Co., as common carriers, failing to pay over moneys received from Placer and Tuolumne County Treasurers.....	6,279 00
S.	Exchange of 3 per cent. on $599,008, paid Messrs. Palmer, Cook & Co., December 15, 1855, for moneys remitted to New York on account of the State, to pay principal and interest on Bonds.....	15,270 26
T.	Amount paid Messrs. Selover & Sinton, Dec. 29, 1855, for alleged overpayment, Oct. 30, 1854, of moneys on account of water lot sales.....	31,300 00
	Total expenditures.....	$2,789,452 37
	Balance deficit.....	20,449 41
		$2,809,901 78

SCHEDULE.

A. Corresponds with Ledger balances upon Major Roman's books.

B. The following exhibits the sources from which the amount charged was received, all of which was paid over upon Controllers' orders:

	In Cash.	In Warrants.
From County Treasurers.....	$1,040,655 15	$187,063 92
" Secretary of State.....	4,307 75	
" Fund Commissioners of City of San Francisco, twenty-five per cent.....		50,000 00
" Estate of Geo. Brock, deceased.....	89 09	
" District Attorney, Sacramento County..		9,673 04
" Gov. Bigler, Custom House Block.....	150,000 00	
" City of San Francisco, land sales and State property.....	398 98	311 39
" Commissioner of Immigrants.....	53,786 00	
	$1,249,236 97	$247,048 35
Total per Controllers' orders.....		$1,496,285 32

Of this amount there is entered in the cash account, $1,426,226 88, and the balance was carried to the Redemption Register.

C. The receipts from this source went direct to the State Treasurer, except the amount of $366 62 entered above, as passing through the Controller's Office; the Journal, the Redemption Registers, the Annual and Special Reports, differing widely with each other, and with the reports of the Land Commissioners. I have entered the amount shown by each, and then the way the amount charged in the general account was derived.

1. *The Journal.*

This book was kept for thirteen months, as before stated, and has thirty-four entries of receipts for State property, fifteen of which specify the names of persons paying, and the kind of payment; the other nineteen do not specify but the kind of payment, no names, and are in aggregate as follows:

Cash	$5,147 50
Warrants	187,706 67
Bonds	59,806 39
Audited Accounts	35,562 65
Treasurers' Receipts	534 57
Total	$288,757 78

2. *The Redemption Registers.*

The Warrant Register has the following amounts entered:

From January, 1854, to July, 1854	$109,494 94
" July, 1854, to February, 1855	143,464 33
" February, 1855, to January, 1856	38,046 11
	$291,005 38

The Bond Register has the following amounts:

From January, 1854, to July, 1854	$60,500 00	
" July, 1854, to July, 1855	5,000 00	
		$65,500 00
To this add amount shown by Journal as received in cash, which is also entered in cash account		5,147 50
Total receipts as shown by books		$361,652 88

3. *The Annual and Special Reports.*

These reports exhibit full Ledger accounts, and the amounts are condensed into a General Balance, and proved correct by the Journal Balance.

The Annual Report, July 1, 1854, states receipts from January to July, 1854	$191,978 90
The Special Report, February 1, 1855, states receipts from July, 1854, to February, 1855	194,774 88
The Special Report, March 1, 1855, states receipts from month of February	7,673 33
Total as per reports	$394,427 11
From this deduct the amount reported July 1, 1854, as a receipt, and charged off, being Treasurers' receipts returned, which amount is in dispute, and which is added to amount of same character in July 1, 1855 report of $529 50	29,785 97
Total reported actual receipts	$364,641 14
The Special Report, made February 1, 1855, states the receipts from July, 1854, to February 1, 1855, to be	194,774 88
The report for the month of February, to be	7,673 33
Total	$202,448 21

The report made July, 1855, (annual) states the same amount of receipts, $202,448 21, to July, 1855, which would exhibit that nothing was received from March 1, to July 1, 1855.

The Redemption Warrant Register has entered as received from February 1, 1855, to July 1, 1855, the sum of		$38,046 11
From this deduct the amount reported for February	$7,673 33	
Also Warrants issued from February to July, 1855, to take up audited printing accounts received as cash prior to that time, and now entered on Register	18,745 50	
		26,418 83
Total received from March to July, 1855, as per Register, and not included in July Report		$11,627 28

4. *Old Board of Land Commissioners' Report,*

Made to the Legislature, dated May 24, 1855, states the amount received for sales State property, and paid State Treasurer, not designating whether Major Roman or Dr. McMeans, to be	$587,408 96

5. *Report of New Board of Land Commissioners,*

Made to the Legislature, dated January 2, 1856, (J. S. Cohen agent,) states that from a careful examination of the books and papers in that office, he finds that there has been received and paid into the State Treasury, for property purchased by sundry persons, at sales made by former Board, the sum of	$500,634 91

6. *Major Roman's Books*

Show receipts entered from this source, of	$134,380 27

7. *Receipts on file with present Land Commissioners, signed by S. A. McMeans, and by "S. A. McMeans, by Selover & Sinton,"*

Show payments in cash	$39,951 09
" " Warrants	80,494 43
	$120,445 52

8. *Discrepancies in above Exhibits.*

		Totals.
Amount received by Major Roman	$134,380 27	
" " Dr. McMeans, per Registers and Cash Book	361,652 88	$506,033 15
Amount received by Dr. McMeans, per Reports, less $29,785 97	364,641 14	499,021 41
Amount received by Dr. McMeans, per Reports, (with $29,785 97)	394,427 11	528,807 38
Amount received by Dr. McMeans, per Reports and Register, and charged in account	375,997 80	510,378 07
Amount received by Dr. McMeans, per Reports (with $29,689 92)	405,687 77	540,068 04

The receipts on file with present Land Commissioners show cash payments of	$39,951 09
The Treasurer only received by his books, in cash	5,147 50
Difference	$34,803 59

9. *The Items of the Amount Charged in the General Account.*

The amount reported as received, July 1, 1854		$191,978 90
" " " from July 1, '54, to Feb. 1, '55		194,774 88
" " " for February, 1855		7,673 33
" entered on Redemption Register in Feb'y.—additional		3 97
" " " " as received from March to July 1, 1855		11,623 31
Total		$406,054 39
From this I deduct the "Treasurer's Receipts Returned," which are in dispute	$29,689 97	
Also, the amount charged in General Account, paid in through Controller, (Item B.)	366 62	
		$30,056 59
Balance charged		$375,997 80

D. Compares with Issue Register of the Controller.

E. Taken from the Treasurer's Issue Register.

F. Taken from Treasurer's books of issue—

Total issue from July, 1854, to July, 1855	$36,574 98
Total reported—Annual Report—July 1, 1855, for same time	13,898 96
Difference	$22,676 02

G. The Bonds redeemed from Sinking Fund, being credited in account for their face, the discount is a proper debit.

H. Is the corrected amount of Vouchers destroyed.

I. Taken from the Governors' and Controllers' receipts on file.

J. Is the amount of Vouchers on file with Committee, of this description.

K. These receipts are on file for the full amount entered.

L. Explains itself.

M. Loss on gold dust, taken by county and paid to State Treasurer, at seventeen dollars and twenty-five cents per ounce, as allowed by law. Mint Certificates on file prove the loss.

N. Interest matured at time of redemption.

O. " " " "

P. " " " "

Q. Credited as per instructions.

R. In February, 1855, the State Treasurer drew upon all the County Treasurers, for the moneys then in their hands to the credit of the State—said drafts indorsed by Controller. Those upon the Treasurers of Placer and Tuolumne Counties were sent through Adams & Co. for collection. The money was paid them, but before it reached the Treasury, Adams & Co. suspended. At the regular settlement of the County Treasurers with the Controller, he ordered the State Treasurer to credit them with the amount thus forwarded, and as I have entered it among the amounts charged in Item B, the credit is a necessary offset.

S. Appendix No. 3 contains a copy of the order upon which this amount was paid—

Amount sent by Major Roman's orders.....	$227,300 33
" " Dr. McMean's "	371,707 67
	$599,008 00

T. Appendix No. 4 contains a copy of the two papers on file relating to this. The entry is made on the Cash Book, January 2, 1856.

This Report embraces all the items mentioned in your instructions, "to give a full and complete exhibit of the books and accounts, their condition, and to report all errors and inaccuracies, with a full and detailed account current."

For the reasons hereinbefore mentioned it is an impossibility to dissect and arrange the various payments in methodical order for entry upon a Ledger, in less than two or three months, and to write up all the books necessary to be kept, but omitted, will occupy the time of any competent person six months. I have entered herein everything, except the War Indebtedness, that pertains to the office. If additional vouchers of disbursements exist they are not to be found on searching and rigid examination of the books and papers of the office.

As the deficit reported could only be affected in the account rendered, by your disapproval of the method of ascertaining the receipts on account of water-lots, your attention is directed to it.

All of which is respectfully submitted,

N. A. H. BALL.

APPENDIX.

APPENDIX.

[No. 1.]

COPY OF ACCOUNT CURRENT WITH PALMER, COOK & CO., AS PER ACCOUNT RENDERED BY THEM, DATED OCT. 30, 1854.

Messrs. Palmer, Cook & Co. in Account Current with State of California,

Dr.

1851	Oct. 30.	To cash of Major Roman			$9,000 00
1852	May 3.	" " "			12,800 00
"	Oct. 14.	" " "			34,500 00
1853	April 2.	" " "			26,250 00
"	" 27.	" " "			20,000 00
"	Oct. 29.	" " "	$63,750		
		Less amount transferred to R. Roman's credit	2,000		
					61,750 00
1854	Jan. 5.	To cash of Dr. McMeans.....			58,835 00
"	Oct. 31.	" " "			3,919 87
					$227,054 87

Cr.

1853	Jan. 17.	By R. Roman's Receipt for Coupons	$175 46		
		" " " "	6,994 80		
		" " " "	16,012 12		
					23,182 38
1854	Sept. 14.	By Dr. McMean's Rec't for Coupons	5,452 53		
		" " " "	77,366 04		
		" " " "	3,150 00		
					85,968 57
"	Oct. 30.	" " " "	57,446 04		
		" " " "	58,992 66		
		" " " "	1,465 22		
					117,903 92
					$227,054 87

STATEMENT OF THEIR ACCOUNT AT THIS TIME, AS PER CASH BOOK AND LETTERS ON FILE. NO OPEN ACCOUNT CAN BE FOUND.

Messrs. Palmer, Cook & Co. in Account with the State of California,

Dr.

1854 Oct. 26.	To cash of Dr. McMeans		$58,000 00
1855 Jan. 17.	" " " to pay Bonds and int'st		110,300 00
" Feb. 5.	" " "		45,000 00
" March 20.	" " "		9,652 80
" Oct. 20.	" " "		86,000 00
			$308,952 80

Cr.

1855 April 2.	By account on file of this date—		
	1 Coupon $13 41		
	962 " 16,835 00		
	933 " 32,655 00		
	————	$49 503 41	
1855 Dec. 31.	By 215 Civil Bonds, burned by Governor and Controller—not entered on the Redemption Register—Bonds paid in N. York	107,500 00	
	By balance for which neither Coupons or Vouchers have been returned	151,949 39	
		————	$308,952 80

[No. 2.]

COPY OF MAJOR LOVE'S RECEIPT FOR "TREASURERS' RECEIPTS RETURNED," WITH MR. GIFT'S EXPLANATION OF THEIR NATURE.

Received, Sacramento, March 3, 1855, from S. A. McMeans, Treasurer of State, the following Treasurers' Returned Receipts, for State Property :

S. C. Hastings	$433 50
Wm. H. White.....	5 07
W. H. Middleton...	1,000 00
Selover & Sinton	2,503 40
" "	2,748 00
Palmer, Cook & Co.....	23,000 00
	$29,689 97

In the aggregate, twenty-nine thousand, six hundred and eighty-nine dollars, and ninety-seven cents, which I promise to return whenever required.

(Signed,) JOHN S. LOVE.
California Land Commissioner."

"Major Love will remember that he obtained from Dr. McMeans, through me, certain returned certificates or receipts, signed by Major Roman and Dr. McMeans, for money paid on account of State Property. These receipts were receipted for by Dr. McMeans, in the same manner as if they had been cash, and the *second* receipt, in the hands of a second or third party, went to the Land Commission, and deeds were issued upon the same. Consequently you will easily perceive that these receipts are charged to Dr. McMeans *twice*. Major Love should return these receipts and credit Dr. McM. with the amount.

(Signed,) GEORGE W. GIFT.

Sacramento, Dec. 27, 1855."

[No. 3.]

COPY OF THE TREASURER'S VOUCHER FOR PAYMENT OF EXCHANGE TO PALMER, COOK & CO.

"*State of California to Palmer, Cook & Co.,*

Dr.

For three per cent. Exchange on $6,993 80 Coupons, paid in New York, from Jan. 1 to Dec. 31, 1852	$209 81
For three per cent. Exchange on $44,184 89 Coupons, paid in New York, from Jan. 1 to Dec. 31, 1853	1,325 55
For three per cent. Exchange on $160,451 68 Coupons, paid in New York, from Jan. 1 to Dec. 31, 1854	4,813 55
For three per cent. Exchange on $102,378 22 Coupons, paid in New York, from Jan. 1 to Oct. 30, 1855	3,071 35
For three per cent. Exchange on $109,000 Bonds, due March 1, 1855, and redeemed in New York	3,270 00
For three per cent. Exchange on $86,000, remitted to New York to pay interest due, Jan. 1, 1856	2,580 00
	$15,270 26

I Certify the the above amount to be just and true,
(Signed,) S. A. McMEANS,
State Treasurer."

"State Treasurer's Office,
Sacramento, December 13, 1855.

Pay the above amount to Palmer, Cook & Co.

(Signed,) SAM. BELL,
Controller of State."

[No. 4.]

COPY OF DR. McMEANS' RECEIPT TO SELOVER & SINTON.

"*This Receipt to be returned on Delivery of Deeds.*

No.

San Francisco, Oct. 30th, 1854.

Received of Selover & Sinton thirty-one thousand three hundred dollars, on account of the interest of the State of California in Water Property, sold on the 26th day of October, 1854, under the provisions of an Act of the Legislature, approved May 18th, 1853, which amount has been paid in the following described funds, to wit:

Seven per cent. Bonds.....	
Interest thereon.....	
Temporary State Loan Bonds.....	
Interest thereon.....	
Controllers' Warrants, $31,300.....	
Cash.....	
	$31,300
Lots, Nos	
.....	

(Signed) S. A. McMEANS,
State Treasurer."

COPY OF SELOVER & SINTON'S RECEIPT TO DR. McMEANS.

"San Francisco, December 29th, 1855.

S. A. McMeans, Treasurer of State, has this day returned to us the sum of thirty-one thousand three hundred dollars, being balance in full due us upon final settlement of moneys received by us for Water Lot Property, sold during the year 1854 and January, 1855, said sum having been overpaid said McMeans by us.

(Signed) SELOVER & SINTON."

[No. 5.]

TRANSCRIPT OF OPEN ACCOUNT WITH PALMER, COOK & CO., ON THE TWO LEDGERS OF THE BOARD OF LAND COMMISSIONERS.

Palmer, Cook & Co.

Dr.					Cr.		
1853.					1853.		
December 28,	To purchase of	Lot	No. 22.....	$7,750 00	December 31,	By am't paid to Treasurer, per receipt,	$25,748 00
"	"	"	23.....	8,000 00	March 21,	" in warants, "	5,127 00
"	"	"	24.....	13,750 00			
"	"	"	34.....	1,375 00			
				$30,875 00			$30,875 00

The above Lots deeded to J. C. Palmer.

1854.					1854.		
March 9,	To purchase of	Lot	No. 12.....	$2,800 00	March 29,	By amount paid on this purchase.....	$7,349 53
"	"	"	13.....	2,000 00			
"	"	"	14.....	2,200 00			
10,	"	"	25.....	6,500 00			
"	"	"	26.....	3,700 00			
"	"	"	27.....	3,800 00			

On the other Ledger, as follows:

Dr. *Palmer, Cook & Co.* Cr.

1853.						1853.	
December 28,	To purchase of	Lot No.	22.....	$7,750 00	December 28,	By amount paid State Treasurer....	$2,748 00
"	"	"	23.....	8,000 00	"	" "	23,000 00
"	"	"	24.....	13,750 00	29,	" "	5,127 00
"	"	"	34.....	1,375 00			
				$30,875 00			$30,875 00
1854.							
March 9,	To purchase of	Lot No.	12.....	$2,800 00	By amount paid State Treasurer.....		$2,800 00
"	"	"	13.....	2,000 00	"	"	2,000 00
"	"	"	14.....	2,200 00	"	"	2,200 00
10,	"	"	25.....	6,500 00	"	"	6,500 00
"	"	"	26.....	3,700 00	"	"	3,700 00
"	"	"	27.....	3,800 00	"	"	3,800 00
June 6,	"	"	15.....	1,500 00	"	"	1,500 00
"	"	"	16.....	2,250 00	"	"	2,250 00
"	"	"	1.....	5,000 00	"	"	5,000 00
"	"	"	2.....	2,000 00	"	"	2,000 00
"	"	"	3.....	2,250 00	"	"	2,250 00
"	"	"	7.....	5,100 00	"	"	5,100 00
"	"	"	8.....	2,250 00	"	"	2,250 00
"	"	"	9.....	2,800 00	"	"	2,800 00
"	"	"	12.....	1,600 00	"	"	1,600 00
"	"	"	13.....	3,250 00	"	"	3,250 00
"	"	"	14.....	2,300 00	"	"	2,300 00
				$51,300 00			$51,300 00

[No. 6.]

SACRAMENTO, February 12, 1856.

Hon. T. J. OXLEY, W. H. TAYLOR, and Others,
Special Committee, etc.:

GENTLEMEN:

Since seeing Drs. Oxley and Taylor last evening, in relation to the returned receipt of Messrs. Selover & Sinton for thirty-one thousand three hundred dollars ($31,300), I have seen Mr. Gift, the gentleman who had charge of my books and vouchers up to June or July, 1855. The State Auctioneers during the water lot sales received the proceeds directly from the purchasers, taking my receipt for the same when I was present to execute it, or else forwarded it to me from time to time by mail or express, and received my receipt in turn.

As a matter of course, no deed could issue until complete payment had been made, as evidenced by the State Treasurer's receipt.

As in some other cases, so it was in this; the State Auctioneers, as I was informed, became the agents for parties in many instances in forwarding money to the State Treasurer, and procuring deeds from the Commissioners. In carrying out these acts, it became necessary to concentrate several small receipts given to different individuals at different times, into one, thus aggregating the whole. You will find a case in point by examining one of my vouchers in your possession, in the form of a receipt, executed by John Love, as one of the Board of California Land Commissioners, for certain receipts given by my predecessor, Major Richard Roman, amounting to between twenty and thirty thousand dollars. In this case I preserved the originals, as they were not my own, as a voucher against my own receipt, given in lieu thereof.

You can therefore readily perceive how it is that the voucher in question has no corresponding single entry on the books of the office, in date and amount. They are all there, but appear in different entries, and under different dates.

I have the honor to be,
Respectfully,
Your obedient servant,

S. A. McMEANS.

[No. 7.]

To the Chairman of the Select Committee, etc.

The affidavit of S. A. McMeans, who, having first been duly sworn, deposes and says: That the order addressed to the Treasurer of State, by Sam. Bell, Controller of State, and dated ———— for fifteen thousand and ———— dollars, authorizing said Treasurer of State to pay said amount to Palmer, Cook & Co., for Exchange paid by them in the settlement of Bonds and Coupons of the State; that the said order was executed at San Francisco where he could not procure a blank warrant, and after settlement made of the parties aforesaid, return was made of the said order to Sam. Bell, who, after some reflection, returned it to affiant, saying that the order was sufficient and as good as a printed warrant, or in words to that effect.

S. A. McMEANS,
Late State Treasurer.

Subscribed and sworn to before me this 23d day of March, 1856.

[L. S.]

W. W. PRICE,
Notary Public.

IN SENATE.] [SESSION OF 1856.

REPORT

OF

SENATE SPECIAL COMMITTEE,

RELATIVE TO

STATE LAND SALES

AT

SAN FRANCISCO, OCTOBER 10, 1855.

JAMES ALLEN, STATE PRINTER.

REPORT.

Mr. President:

Your Committee, in compliance with the resolution of the Senate, repaired immediately to San Francisco for the purpose of more readily obtaining the evidence of persons present at the sale of the State Property on the 10th of October last, and such other testimony as would enable them to form correct conclusions in regard to the subject of their investigation. They held two sessions in that city, the first of four, and the latter of five, days, during which time they were unremittingly engaged in the discharge of their responsible duties. Due notice was given, by publication in the various San Francisco papers, of the time and place of their meeting, and all parties possessing information concerning the above-mentioned sale were requested to attend and testify.

The Committee experienced much difficulty in procuring the appearance of witnesses; and in order to obtain testimony, had in many instances to force the attendance of parties by compulsory process. Your Committee deprecate, and cannot too severely censure the practice which so generally prevails, of persons communicating facts to members of legislative committees, and afterwards, when summoned, of evading process or refusing to testify. Such conduct renders investigation of the kind the Committee were appointed to conduct, extremely difficult; it also leaves impressions on the minds of the Committee upon which they cannot officially act, or base a report. The Committee, notwithstanding these difficulties, succeeded in obtaining the testimony of a large number of witnesses.

The evidence touching the sale of October 10th, 1855, is conflicting in the extreme; some testify that the sale was conducted with undue haste, that the auctioneer evinced partiality to certain individuals, and prejudice against others, and that injustice was done alike to the rights of private parties and the interests of the State.

On the other hand, a large number of equally respectable witnesses assert, that the sale was fairly and impartially conducted, and that the property of the State was sold for its full value. Your Committee do not deem it their duty to decide on the credibility of the witnesses, or the preponderance of conflicting testimony. One fact, however, is uncontradicted, and cannot be passed over without comment. It appears that the interests of the State in ———— eight ———— hundred ———— ———— —— lots, these lots varying in value from the sum of five dollars to several thousands, and located in different portions of the City of San Francisco, were disposed of during the sale, not occupying over an hour or an hour and a quarter.

Your Committee can see no valid reason why a course of procedure unheard of in selling by auction the interest of a private estate, should have been resorted to

in disposing of the property of the people. Notwithstanding the opinion of many respectable witnesses to the contrary, your Committee believe that if less haste and greater precaution had been observed in conducting the sale, a much larger amount would have been realized.

Your Committee respectfully submit, without further comment, all the evidence touching the matter, to the consideration of the Senate. They would, however, earnestly recommend, that whatever conclusion may be formed as to the regularity, or irregularity, of the transaction, no attempt be made by the State to set aside or disturb the sale.

There is no rule in law or equity better established by the decisions of State and Federal tribunals, than that the principal is estopped from repudiating the acts of his agent, when performed within the scope of his authority. Even if it should be conceded that the acts of the auctioneer were irregular in some instances, there is no proof that he transcended his authority or violated the letter of the law. Many innocent parties have acquired title in good faith, either at the sale or since then, by purchase made *bona fide*, and for a valuable consideration. All attempts to set aside the sale could tend only to depreciate the value of much of the taxable property of the State, and inflict irreparable injury upon innocent parties. Such attempts would be enjoined by the courts, and end in expensive and fruitless litigation.

In concluding this branch of the subject committed to their care, the Committee present the names of those who testified, together with their evidence:

FOR THE SALE.

A. C. Peachy,
John Satterlee,
W. H. Rogers,
P. C. Bowman,
H. A. Cobb,
H. C. Partridge,
T. C. Gilman,
E. T. Crane,
P. W. Van Winkle,
T. G. L. Smith,
R. H. Sinton,
S. C. Hastings,
R. M. Jessup,
J. R. Coryell,
E. D. Carter,
W. F. McLean,
R. A. Fish,
F. Vassault,
Sam. Bell,
John S. Love,
Ed. Jones.

AGAINST THE SALE.

J. S. Polack,
W. H. Clark,
Jas. Edwards,
Sam. Soule,
H. O. Gaylord,
Ed. Franklin,
John Nightengale,
Jas. T. McDougal,
J. B. Townsend,
James Phelan,
Josiah Drake,
C. J. Joseph,
C. O. West,
L. T. Poland,
George Simpton,

The Committee now approach another subject of their investigations, upon which there is no contrariety of testimony, and concerning which there can be no difference of opinion. They find by a certified copy of the records of the Superior Court of the City of San Francisco, hereto appended, and made a part of this

report, that on the ninth day of December, 1854, the Board of State Land Commissioners, consisting of Levi Hermance, Jos. Hopkins, John S. Love, L. Pickering and George O'Doherty, instituted, in the name of the people of the State of California, a suit in the said court against one W. H. Talmadge, to recover the sum of $8,550. The sum was claimed as the difference between the amount bid by the said Talmadge at the State sale, which took place on the 28th of December, 1853, for certain lots bought by him, not paid for, and the amount for which the said lots were afterwards sold by the Commissioners. To the complaint, Talmadge filed a demurrer and answer; the latter, among other allegations, averred that the defendant at the sale had acted only as the agent of Jesse Carothers. On the 26th of December, 1854, Carothers filed in the above-mentioned suit his petition of intervention. The intervenor alleges that Talmadge was his agent at the sale in buying the lots mentioned in the complaint, and that he (Carothers) was then a creditor of the State of California in the sum of $75,000, for money expended, and labor performed by the petitioner, at the request, and by the order, of the legally constituted officers of the said State. The services performed, as alleged by the petitioner, consisted in obtaining documents and other information from Washington City, establishing the interest of the State in and to the water lots sold, and in procuring the written legal opinion of certain eminent counsel from the east, as to the rights, interests and claim of the State in and to the property mentioned. Your Committee would here suggest that they can imagine from the past pursuits of Mr. Carothers nothing peculiarly fitting him for the discharge of the onerous duties which he assumed; and further, while they doubt not the eminent ability of the gentlemen selected *from the East*, they are still impressed with the belief that California possessed among the members of her own bar sufficient legal acumen to meet any emergency which might arise involving her own interests. The whole claim of Carothers was predicated upon a contract made between the said Carothers and S. C. Hastings, Attorney-General, on the 17th of March, 1853. This agreement is of such an extraordinary nature that the Committee embody it in their report.

"*Articles of agreement made this* 17*th day of March*, 1853, *between Clinton Hastings, Attorney-General of the State of California, party of the first part, and Jessee Carothers, of San Francisco, Broker, party of the second part*—

Witnesseth: Whereas, there is now pending in the District Court of the United States for the Northern District of California, a suit in equity, wherein the United States are complainants, and Theodore Shillabor, John B. Steinberger, Joseph Palmer, Charles A. Cook and Edward Jones, (said Palmer, Cook and Jones, comprising the firm of Palmer, Cook & Co.,) and the people of the State of California, defendants. And, whereas, the said C. Hastings, Attorney-General, as aforesaid, on behalf of the said State, has filed an answer to the complainants' bill of complaint, and also a cross bill, claiming for the State all the lands and premises in controversy, as well as the rents and profits accrued, and to accrue, therefrom; and which said land and premises are described in the bill of complaint, as being the Government Reserves, so called, situate in the City of San Francisco, viz:

First. The Government Reserve bounded by Montgomery Street on the west, Washington Street on the south, Jackson Street on the north, and deep water on the front of the city on the east.

Second. The Government Reserve bounded by Sansome Street on the west, Pacific Street on the south, Broadway Street on the north, and deep water on the front of the city on the east.

Third. Rincon Point Reserve, being all the ground and premises lying between Beale Street and deep water on the front of the city.

And, whereas, it is understood and conceded by all the parties, that the said suit of controversy shall be removed to the Supreme Court of the United States, by appeal, or otherwise, immediately after the decision of the District Court shall be made and announced.

And, whereas, the property and matters in controversy are of great value and importance to the State of California, and the proper conduct and management of the controversy will require large expenditure of money from time to time for the employment of counsel, attorneys and solicitors, in the preparation and argument of the cause before the Supreme Court of the United States, and before the said District Court, and in the final settlement and adjustment of the matters in controversy;

Now, therefore, to the end that the rights of the State may be faithfully and energetically proseeuted and defended, without any expense to the State, the said C. Hastings, Attorney-General, as aforesaid, for and in behalf of the said State, stipulates and agrees that the said Jesse Carothers shall be, and he hereby is, authorized and requested to engage the services of able counsel, attorneys and solicitors, and to compensate them for their services in such manner and upon such terms; nevertheless, that they shall have no right to claim of the State of California any fees or compensation for services, or costs, or disbursements, or otherwise than shall be hereinafter expressed; and the said Jesse Carothers shall employ no counsel, or attorneys, or solicitors, without the consent and approval of the Governor of the said State, and the Attorney-General; and, as compensation to said Carothers, and to enable him to retain and pay such counsel, attorneys and solicitors, and to defray other and necessary disbursements, it is hereby stipulated and agreed, that the said Carothers shall be entitled to, and the State of California shall quit claim and release to him, or his assignees, forever, one equal tenth part of all the lands and premises which, by the judgment of the Supreme Court of the United States in said suit, or by other adjudgment and settlement of the same, shall be ascertained and decided to be the property of said State, or, (if the State shall prefer to do so,) said State shall pay him, or his assignees, one-tenth part of the estimated value thereof. And said Jesse Carothers shall also be entitled to, and shall receive, one equal tenth part of all moneys which shall be received or recovered by said State in said suit from Palmer, Cook & Co., or otherwise, for rents or profits derived from, or to accrue from said premises. And said Jesse Carothers hereby stipulates and agrees that he will well and faithfully perform his duties as such agent to the State, and that he will save the State harmless of, or from all costs and charges in the premises. In witness whereof, the parties aforesaid have hereto set their hands and seals the day and year first above mentioned.

(Signed) S. C. HASTINGS, [SEAL.]
Attorney-General.

JESSE CAROTHERS." [SEAL.]

But to return to the suit. An answer was filed to the petition of intervention by the Board of Land Commissioners, December 28th, 1854, denying that Jesse Carothers had any legal or equitable claim against the State, or that the State ever contracted with him as set forth by his intervention; also denying that the person with whom Carothers had contracted, had any power to contract with the intervenor. On the same day Judge Satterlee of the Superior Court, appointed Louis R. Lull, Esq., Referee, to take testimony and report his finding of the facts and the law, and a judgment thereon. On the 30th of May, 1855, the Referee presented and filed his report, finding that there was due from the State of California to Carothers, $72,815 50, and that judgment be entered in his favor for

that sum. The next act in this strange judicial proceeding, was the filing of a stipulation in the Superior Court on the same day that the Referee's report was made, it read as follows:

"Superior Court of San Francisco, San Francisco County, ss.

It is hereby stipulated and agreed, that the Referee may file his report in this case, and as to all objections in the time of making his report, and all objections of form be, and the same are, hereby waived, and that judgment may be entered thereon.

G. C. BATES,
Attorney for Interpleader.

WM. M. STEWART,
Counsel of Plaintiff."

On the 31st of May judgment was entered up against the people of the State of California, in the Superior Court of San Francisco, for the sum of $72,518 50, together with interest at ten per cent. per annum from the date of judgment and costs and disbursements in the action, amounting to the sum $1,071. On the 13th of January, 1855, Jesse Carothers assigned to John R. Coryell his entire interest in the claim pending in the Superior Court, on which the aforesaid judgment was rendered. Afterward, on the 9th of October, 1855, Coryell assigned to David Calloway an interest in the judgment, amounting to $27,528. The State has received three credits at different times on the Carothers' judgment. On the 8th of November, 1855, appears a credit of $23,958 25, allowed by Coryell. On the day following, another credit by Calloway of $26,358. Afterward, on the 24th of December, 1855, the receipt of the Assignee (Coryell) to the agent of the Board of Commissioners, of $3,200, was entered as a further credit on the said judgment. These credits in all, amount to $53,516 25. It appears from the admissions of J. S. Cohen, agent of the late Board of Land Commissioners, and from other testimony, that the credits above mentioned were allowed for moneys or State securities paid to the assignees by the said agent. The funds thus applied by the agent were from the proceeds of the October sale. Your Committee, after a careful examination of the law creating the office and defining the duties of the said agent, can find no authority for his paying or canceling any portion of this or other judgment.

Your Committee are clearly of the opinion, that the agent in so doing exceeded his authority, and to the extent of the funds thus applied, is liable to the State. Your Committee, therefore, recommend that the Attorney-General be instructed to institute proceedings against the said agent and the sureties on his official bond, for the recovery of the sum of $53,516 25, that being the amount of the public funds misappropriated by him. Your Committee would call the attention of the Senate to the fact, that from the proceeds of the sale of the tenth of October, after defraying a portion of the expenses of the same, and making the illegal payments above mentioned, only between fifty and sixty dollars remained in the hands of the agent.

But this is not all; only a few days ago both branches of the Legislature passed a bill appropriating a large amount to defray the expenses of advertising the sale in various papers through the State. If the bill should receive the sanction of the Executive, the only equivalent which the people of California will have received for her interest in the property sold on the tenth of October last, is a paltry sum of less than sixty dollars in cash, against an indebtedness of

more than $20,000. Your Committee would again revert to the proceedings in the Superior Court, and are happy to inform the Senate that the present Attorney-General has appealed from the judgment rendered therein, to the Supreme Court. They also deem it proper to communicate the fact that on the twenty-seventh day of last month an order was made by the Hon. D. O. Shattuck, Judge of the Superior Court, vacating the Carothers' judgment, and pronouncing it absolutely void. Your Committee in reviewing all the circumstances connected with the rendition of judgment against the State, and of the agreement upon which the pretended claim of Carothers was based, can find no language adequate to express their regret and indignation. Attorney-General Hastings, as will be seen by reference to his testimony before the Committee, admits that he made on behalf of the State a contract which he knew to be illegal and void. Although the sworn officer and legal adviser of the State, he delegates to a San Francisco broker the duty of selecting counsel to assist California in asserting her rights. Although trusted and honored by the people, he wilfully betrays their confidence, and violates the sacred obligation of his office, by entering into a fraudulent arrangement, which has resulted in much mischief to the country.

Again, we find that the acting Attorney-General, W. M. Stewart, signs a stipulation, by which he waives the legal rights of the State and allows a judgment to be entered against her upon the simple report of a Referee, to an amount exceeding $73,000. Mr. Stewart states in his testimony, before the Hon. D. O. Shattuck, during the recent proceedings in the Superior Court, that he signed the stipulation under an erroneous impression, and without a knowledge of its contents. For the sake of human nature, the Committee will believe that his statement is true; even then, he has been guilty of gross and culpable negligence. The Committee will not pursue the subject further, but leave it with the suggestion, that the Senate should recommend to the Grand Jury, of the County of San Francisco, a thorough investigation of all the circumstances connected with the Carothers' judgment, and a prompt presentment before a tribunal of justice, of the guilty parties. Such a course, although it will not repair the injury which has been inflicted, may prevent others from attempting similar frauds. In reporting the result of this investigation, your Committee have been prompted by no feelings of personal malice, but simply by a desire to discharge, with fidelity, the responsible trust confided to them.

All of which is respectfully submitted,

JNO. D. SCELLEN, Chairman.
F. TILFORD,
W. W. HAWKS,
JAMES W. COFFROTH.

TESTIMONY TAKEN BEFORE COMMITTEE.

TESTIMONY OF EDWARD FRANKLIN.

Being duly sworn doth depose and say, that he is a real estate agent and auctioneer; was present at the sale of Public Lands on the 10th October last. Sale occupied about three-quarters of an hour. Sale embraced about eight hundred lots. Witness was present for the purpose of purchasing for another party, a lot marked in the catalogue as lot number six hundred and six, which lot had been sold at a previous sale for upwards of $3,000 and was offered for re-sale at the said sale of October; was instructed to bid as high as five hundred dollars for that lot. Has attended many auction sales, but never found his vigilance in following the auctioneer so completely at fault. Kept his eye on number six hundred and six but never could hear anything of it during the sale. The auctioneer was turning constantly from page to page of the catalogue, and so mistyfied the bidders that it was impossible to tell what or how many lots were sold. When any one made a higher bid for a piece of property than witness believes the auctioneer anticipated, he, the auctioneer, would cry out to the bidders, "are you aware, sir, that you are only buying the State's interest for ninety-nine years?" thus intimidating those who had the courage to bid. A majority of the lots sold were knocked down to the same party; does not remember his name; considers that a fair sale of the property would have brought three or four times the amount.

TESTIMONY OF JOHN NIGHTINGALE.

Being duly sworn doth depose and say, that he resides in San Francisco and was present at the sale of the State's interest in certain property in San Francisco, on the 10th October, 1855, at the auction room of Messrs. Selover & Sinton; was there soon after the sale commenced and remained about half an hour; was requested by Mr. B. Richardson to bid in for him certain lots mentioned in the catalogue of sale. The lots in question were not offered while I was present. After an absence of about twenty minutes I returned and found the sale about closing.

TESTIMONY OF CHARLES O. WEST.

Being duly sworn deposes and says: I was not at the sale of the 10th October, 1855; I know nothing about it, nor of any circumstances connected with it. I do not recollect of being at the sale; if I was there I took no interest in, and know nothing about it.

Subscribed and sworn to, February 23d, 1856, in presence of

JNO. D. SCELLEN.

TESTIMONY OF J. B. McMINN.

Being duly sworn says, that he is now Clerk of the Superior Court of the City of San Francisco, and was acting as Deputy Clerk of said Court on, and previous to, May 30th, 1855. The record of the Court in the case entitled, "The People of the State of California *v.* W. H. Talmage, defendant, and Jesse Carothers, intervenor," furnished under seal of the said court, contains a full and accurate copy of all the proceedings in the above-mentioned case.

Subscribed and sworn to before me in Committee Room, this 26th Feb. 1856,

F. TILFORD,
Of Committee.

TESTIMONY OF GEORGE WALLACE.

Being duly sworn says, that he resides in San Francisco and is by profession a lawyer; was present at the sale of the State's interest in water-lot property, on 10th October, 1855; was present but a short time toward the close of the sale; attended on behalf of a client, to bid in for him a lot on Battery Street, near Broadway, in which he was interested. The lot had been sold prior to my coming in, at least after the sale was over I was told that it was sold, and supposed it took place before my coming in.

Subscribed and sworn to before me, in Committee Room, Feb. 25th, 1856,

F. TILFORD,
Of Committee.

TESTIMONY OF JAMES PHELAN.

Being duly sworn deposes and says: I reside in San Francisco and engaged in the wholesale liquor business; I attended the late sale of the State Land Commissioners; I went there for the purpose of perfecting title to property I held by purchasing the State's interest; I was there before the sale commenced and remained until the sale was concluded. The auctioneer commenced at the City Slip Property, and sold in one lot, or the privilege of any number; the sale was made hastily; the property I desired was sold in a privilege and I did not get it, and I have not been able to procure it since. The two lots I wanted to get in the Slip Property were sold for fifty dollars a lot. Before the sale commenced Mr. Selover stated to me, that it did not matter who was the buyer at the sale, the party who desired it would get it for the exact sum it was knocked off at. I have not yet received my title for it. A man named Galloway was the purchaser of my lot. I have called upon Mr. Selover, Charles D. Carter, and others, to procure a deed for the lots, but have been unable to procure it. Mr. Carter has offered to me since the sale, to get the lots for me from Galloway for two hundred and fifty dollars apiece. I called upon Mr. Selover after the sale and told him that great injustice had been done me and that I was then about to institute legal proceedings. He remarked to me, that he wanted to get even on some men in this town. I asked if he had ill feelings against our firm? He said, no; he thought that the parties who bought the lots would want nothing more than a reasonable profit to give me a title. After lot three was sold I offered to Mr. Selover one hundred dollars, or one hundred and fifty dollars, for the State's interest, but he said he could not accept, as he would have to consult Butler. After this Mr. Selover told me that Butler would not accept, as he thought he had a good thing and intended to make a speculation out of it himself. Lot three was included in a privilege, and was sold for a sum varying between eight dollars and sixteen dollars. From one hundred and fifty to three hundred lots were sold to one purchaser, and the period for their sale was less than a minute. Some of the lots were sold fairly, but the bulk of the property was hurriedly passed over. The lots I purchased, six in number, I paid for in cash. Just at the time lot number three was being sold and was purchased off, Mr. Clark, who had an interest in it, bid twenty-five dollars advance, and told Mr. Selover that it was his right to do so. Mr. S. denied it, and said he should bid before it was knocked down. It was sold, probably in less than a minute, to a man named, I think, Brown or Butler.

Subscribed and sworn to before Committee, this 26th day of Feb. 1856,

JAS. W. COFFROTH.

TESTIMONY OF JOSIAH DRAKE.

Being duly sworn says, that he resides in San Francisco and was present during the whole of the State sale at Selover & Sinton's, last October 10th ; attended in order to purchase certain lots near North Beach, and the sale was conducted in such manner that deponent had no opportunity of bidding for the lots in question. Upon several occasions the auctioneer embraced in one bid a number of lots, running over several pages of the Catalogue. The bids were made and taken very rapidly, and no time allowed the audience to form any correct idea of what lots were being sold ; no one could ascertain whether his own lots were put up. One wishing to buy one or two lots had no possible chance.

Subscribed and sworn to before me in Committee Room, Feb. 25, 1856,

F. Tilford,
Of Committee.

TESTIMONY OF JOHN SATTERLEE.

Being duly sworn doth depose and say, that he was present at the sale of the State's interest in certain water-lot property, situated in the City of San Francisco, sold 10th October, 1855, at the auction room of Messrs. Selover & Sinton, San Francisco. The attention of witness was more particularly directed to the sale of the State's interest in what was known as the City Slip Property ; it was sold with the privilege—as he thinks—of one with more lots. All the lots were struck off to one person—the bid at least was taken in the name of "Calloway" —at fifty dollars per lot ; this included the entire State's interest. Don't think the interest in each lot thus sold was really worth fifty dollars. Witness saw nothing throughout the sale that was unfair or improper, or calculated to excite a suspicion of fraud ; the only favoritism exercised by the auctioneer seemed to be shown to the *actual occupants*, designing to give these a preference over mere outside speculators.

Subscribed and sworn to before me, in Committee Room, this 23d Feb. 1856,

F. Tilford,
Of Committee.

TESTIMONY OF WILLIAM H. ROGERS.

Being duly sworn, says, that he is a merchant, resident of San Francisco, and was present at the sale of State's interest, on the 10th October, 1855 ; attended for the purpose of bidding in fifty vara lot, numbered on the official map of said city, three hundred and twenty-eight. Deponent owns, under a city title, a portion of said lot, and has improvements thereon. It was his intention to have bid in the whole lot and re-sold to the other property-holders. Deponent went to the auction room of Messrs. Selover & Sinton, for the purpose above-mentioned, about five or ten minutes after twelve o'clock. The sale was advertised to commence at twelve. Deponent's lot was number three hundred and ninety-nine on the catalogue of sale ; when he came in the auctioneer was selling some lot specified in the first part of the catalogue. He skipped to a lot in the back part of the catalogue, and continued to do this throughout the sale, or a principal part of it ; in consequence of this deponent was unable to know when the lot, three hundred and twenty-eight, was struck off. Deponent afterwards bought in said lot from Mr. Selover, paying him, for two-thirds of it, four hundred dollars. The lot was struck off at less than twenty dollars to the purchaser who bought it at the sale. Selover mentioned at the time that he was acting for A. J. Butler. Mr. S. is the only man I know in the transaction ; Butler I did not then know, nor do I now know him ; and further deponent saith not.

Subscribed and sworn to before me, this 25th Feb., 1856, in Committee Room,

F. Tilford.

TESTIMONY OF JACOB S. COHEN.

Being duly sworn deposes and says : I was agent for the late Board of California Land Commissioners, consisting of the late Governor, Controller and Secretary of State, and was appointed on the ——— of ——— 1855.

Ques.—Do you know for what the sum of ——— dollars was paid to J. R. Coryell, and to D. Calloway the sum of ——— dollars, returned by you as a part of the expenditures made during the term of office of said Board. For what and by whose authority were these expenditures incurred ?

Ans.—The said payments were made in part satisfaction of a judgment in the Superior Court of the City of San Francisco, in the the case entitled, "The People of the State of California *v.* W. H. Talmage and Jesse Carothers, intervenors." The above payments were made in pursuance, and by virtue, of an order made by the said Board, authorizing and directing deponent to adjust all unsettled accounts against the old as well as the new Board, but in no case to allow a claim originating under the old Board, until attested by oath of the claimant—in the instance referred to the oath accompanied the claim—all of

which will fully appear by reference to the Journal of the proceedings of the Board, and the communication of the said Board now on file.

I was further induced to make the payments above-mentioned, by the affidavit and legal opinion of S. C. Hastings, formerly Attorney-General of the State, and by whom the contract, upon which said judgment was rendered, was made. The opinion of said Hastings was in writing, and states that the judgment against the State was just and equitable. Under such circumstances I felt fully authorized to make said payments. The payments were made from time to time, as I might have funds in my possession, which had been received on State's sales, for the State property.

TESTIMONY OF ANDREW J. BUTLER.

Being duly sworn deposes and says, that he is a resident of San Francisco and his business is that of a broker. I have never been a Clerk of California Land Commission, nor of Selover & Sinton, auctioneers; I was present at the late sale of State property; the sale occupied about one hour and a quarter; I attended one sale before, and this last one was conducted about the same as the sales under the old Board of Commissioners; I did not see any preference shown to bidders. Some of the property sold for more than it was worth, and some not as much as its true value. I don't know of any agreement between the auctioneers and outside parties; I bought property at the sale; I recollect purchasing lot number three hundred and ninety-nine; I have no recollection of selling it; I never authorized Mr. Selover to sell for me, but I several times signified to him what I would take for lots that he might mention to parties wanting them, whom I did not know.

I know nothing of the Carothers' judgment, except hearsay; I had a conversation with Dr. Coryell upon the subject of this judgment. He told me that he thought he had a good thing, but it turned out badly, for he had to settle with too many persons who had prior liens upon it. Talmage, Geo. C. Bates, and others, held claims against it.

I made certain payments for S. C. Hastings, for property he purchased at the land sale. I paid for him from $1,800 to $2,000 to the Land Commissioners, in State scrip.

Subscribed and sworn to before me, in Committee Room, this 25th Feb. 1856,

Jas. W. Coffroth,
Of Committee.

TESTIMONY OF L. T. POLAND.

Being duly sworn doth depose and say: S. C. Hastings requested witness to attend the last Public Land sale and to bid off such lots as he, Hastings, should designate. Sale took place on the 10th October, 1855, in salesroom of Selover & Sinton, Merchant street, San Francisco. Hastings stood alongside of witness during the sale and told him when to bid, throughout the sale. Hastings did not give witness $1,000 for his services. Witness heard Hastings say that he had told the Land Commission he had to give $1000 to witness. The deeds to Hastings, for the lots bid in by witness, show a payment, made by Hastings, of $2,000; recollects seeing in the papers that Hastings was credited with $6,200 by the Land Commission, for payments on property bid in by witness. Witness asked Hastings how it was? His only reply was, that his deeds would show how much he paid. Has heard Hastings say, that he had the Land Commission in his power and they did not dare to do otherwise than he wished, with reference to giving him his deeds.

Hastings said he considered Coryell's judgment against the State as a swindle, and made Coryell on that ground, deed him, Hastings, some of the lots which he, Coryell, had bid in at the sale—Hastings paying to Coryell the amount of C.'s bids on the same. The lots that witness bid in, by the printed catalogue, were, four hundred and thirty-six, four hundred and thirty-seven, four hundred and forty-six and four hundred and fifty-eight, in block number fourteen; also, in block number thirty-one, lots nine hundred to nine hundred and thirty-five, inclusive. These lots were knocked down to witness for about five dollars a lot; witness believes they were worth fifty dollars apiece. Also, in block number thirty-two, nine hundred and thirty six to nine hundred and forty-seven, inclusive; these also were knocked down for five dollars apiece, and worth, in the witness' opinion, fifty dollars. Also, one hundred vara lot, number three hundred and twenty-two, witness believes this lot to be worth six or seven thousand dollars. It was knocked down to him for something between fifty and one hundred dollars—does not recollect exactly. Also, lots in block number thirty-four, numbers 1,025 to 1,040, inclusive; bid them in for about ten to five dollars apiece; considers them worth about twenty dollars apiece. Also, in block number thirty-six, lots numbers 1,116 to 1,122, inclusive; numbers 1,125 and 1,126, and lot number 1,129. Witness bid them in for something between five and ten dollars a lot. Also, lots in block number forty-one, numbered from 1,308 to 1,313, inclusive, and lot 1,315; paid about the same price as for the others—in fact paid nearly the same price for all he had bid in at the sale, except one block (does not remember which), for which he bid about seventeen dollars a lot. Also, lots numbers four hundred and twenty-seven and four hundred and twenty-eight, on the catalogue, and numbered thirty-eight and thirty-nine on the map by which the sale was made. These lots are worth $3,000 or $4,000 apiece at least; does not recollect what he bid, but not near that figure. Lots in block bounded by Jackson, Oregon, Drumm and East streets, numbered on the catalogue, four hundred and twenty-nine, four hundred and thirty and four hundred and thirty-one, and on the map, three, four and five; bid off lot number four at $3,000, number three at $2,200, and for number five, $2,400—considers them worth at least $15,000 altogether. Also, in block nineteen, map number, lots five hundred and nineteen to five hundred and fifty-one, inclusive, worth about twenty-five dollars apiece; bid them in at about five dollars. Also, lot number

five hundred and seventy-six, in block twenty, worth about fifty dollars ; bid in for about the same as the last.

Subscribed and sworn to this 23d Feb., 1856, in presence of

JNO. D. SCELLEN.

L. T. Poland being recalled, says, that in his estimates of the value of property, (outside of Government Reserves,) as made in the foregoing deposition, he had reference to the market rates of the property, including present possession, and not to the State's interest.

L. T. POLAND.

L. T. Poland being again recalled, says, that the lots between numbers three hundred and nineteen to three hundred and ninety-eight, inclusive, by the catalogue numbers, embracing eighty-five lots, were sold at one time, as witness believes, to A. J. Butler, for five or six dollars a lot. The State's interest in lot three hundred and nineteen, on the catalogue, embraced in the eighty-five lots, cannot be worth less, in the opinion of witness, than two thousand dollars. The State's interest in lot three hundred and twenty on the catalogue, also embraced within the eighty-five lots sold, is worth $5,000. The State's interest in lot three hundred and twenty-four, also included in the same list, together with lot three hundred and twenty-five, is worth $1,000. Considers the State's interest in three hundred and twenty-six and three hundred and twenty-seven, in the same list, to be at least $2,000. Besides numerous other lots, in this list of eighty-five, which did not bring within many thousands of dollars their value. Witness considers what is known as Market and Sacramento Street Gore, to be worth *at least* $10,000—that is the State's interest in the property.

Lot number three hundred and eighty-seven on the catalogue, which was sold in the same list, at the prices above-named, cannot be worth less than $1,000. Witness speaks only of the State's interest in the property. Witness was only at the sale to bid in property for Judge Hastings ; he was there as his agent, and did not bid any for himself.

L. T. POLAND.

TESTIMONY OF HORACE O. GAYLORD.

Being duly sworn, says : That he resides in San Francisco and is by occupation a real estate broker. Witness was present at the State's sale, which took place on the 10th October last, from its commencement to the termination. The sale lasted from an hour to an hour and a half ; it was conducted with such hot haste that there was no chance for all the parties present ; lots were sold in large numbers, generally, and considerable skipping about through the catalogue. A large amount of lots were struck off before witness could ascertain what were being sold, although he had a catalogue in his hand. The lots in which witness was particularly interested ranged, on the sale catalogue, from three hundred

and sixteen to three hundred and ninety-nine, and were struck off in a minute's time. Among these were some of the most valuable lots in the catalogue. Immediately after (almost instantly) the above lots were sold, an advance of twenty-five dollars per lot was offered by some one in the crowd, but no attention paid to it. After that the sale was continued with much less haste. Before sale closed I bought some half dozen lots in a body. It seemed that the skipping about, before spoken of, was with the intent to blind all the audience, except those interested. Am friendly with all parties concerned, and have no feeling in the matter whatever.

Subscribed and sworn to before me, in Committee Room, Feb. 25. 1856.

F. Tilford,
Of Committee.

TESTIMONY OF SAMUEL SOULE.

I, Samuel Soule, being of lawful age, make affidavit: That I was personally present at the sale of the interest of the State of California in certain water-lot property, in the City of San Francisco, at the office of Selover, Sinton & Co., on the tenth day of October, A. D. 1855, at which time and place Mr. Selover conducted said sale in the following manner:

At the beginning of the sale he (Selover) sold some lots singly, by their number and description, giving or allowing a fair opportunity for competition, after which he sold a very large amount, in batches varying from a moderate number of lots to a number greater than one hundred, in a batch—not following the catalogue by page or number, but shifting from page to page and number to number, and selling with such rapidity that, with a catalogue in my hand, I could not ascertain what lots were being sold before they were knocked down to some person, as I supposed, in the rear of the auctioneer's stand, at the nominal price of eight and ten dollars each lot.

I have been credibly informed since the sale and believe it to be true, that Mr. Selover has received for one lot, from the person in possession, *eight dollars* for the lot and *five hundred dollars* for the deed; the same being one of the lots sold in one of the great celerity sold batches, at eight dollars per lot.

Samuel Soule being duly sworn, says: That he has read the foregoing statement by him signed, and knows the contents thereof; that the same is true to the best of his knowledge and belief.

Subscribed and sworn to this 11th Feb., 1856, in presence of

Jno. D. Scellen.

TESTIMONY OF JAMES EDWARDS.

The undersigned, resident of the City of San Francisco and State of California, was present at the State Sale of Real Estate, held on the 10th day of October, 1855, at the auction rooms of Selover, Sinton & Co. I witnessed the manner of conducting said sale by Mr. A. A. Selover, auctioneer, and consider it was conducted irregularly and unfairly as regards some portions of the property offered at said sale, and injuriously to the interests of the State and also to persons wishing to purchase property at the sale—whole blocks being put up at a time, and sold for so much per lot, and knocked off on a single bid (to fictitious names as I have since been informed), and before *bona fide* bidders could have time to turn to the pages of the catalogue used upon that occasion, and ascertain the location of property offering, and before bidders could give in their bids. On some portions of the property offered, there were persons denied the privilege of bidding, or, in other words, their bids were not received, although said sale proclaimed to be at public auction, and the property to be sold to the "highest bidder."

From the charges and expressions that passed between parties desirous of bidding or buying, and the auctioneer, in regard to the property above alluded to, I am led to believe that the auctioneer had personal revenge or pique to gratify. On the other hand, when property was put up fairly and a single lot at a time, and competition in bidding allowed, the prices ranged much higher, consequently, more advantageously to the interest of the State.

James Edwards, being duly sworn, says: That he has read the foregoing statement by him signed, and knows the contents thereof, that the same is true of his own knowledge.

Sworn and subscribed to in presence of

JNO. D. SCELLEN.

TESTIMONY OF WM. H. CLARK.

STATE OF CALIFORNIA, County of San Francisco, ss.

William H. Clark, being duly sworn, deposes and says: That he is by occupation an attorney at law, and has been resident since 1849 in California, most of the time in San Francisco; that he attended the sale on the 10th of October last, by Selover & Sinton, auctioneers, of the interest of the State of California in certain water lot property in the City of San Francisco. The number of lots embraced in the catalogue used at the sale was eight hundred and sixty-seven, all of which were represented to have been sold: the time occupied by the sale was very brief, considering the large number of lots disposed of; the deponent did not observe the time by a watch, but thinks it not more than an hour, and it might have been less; Selover was the auctioneer, who cried the property and knocked

it down; Sinton stood by assisting him; the sale was conducted with the utmost rapidity; the lots were, for the most part, sold in large parcels or assortments, some of which exceeded one hundred in number. The property was not sold in the order of the catalogue, but there was a continual skipping about, back and forth, rendering it impossible for any one not previously apprised of the intended order of the sale to keep up with the rapid pace of the auctioneer. The lots were sold by the catalogue numbers; when sold in large assortments, they were usually described as from a certain number to a certain number, inclusive—these numbers being those of the first and last lots in the assortment, the intervening numbers not being mentioned; this announcement occupied but a few moments of time. The numbers and descriptions of the lots, as designated on the official map, were not called. Had this been done and no catalogues been printed, the parties at the sale could form some idea of what was being sold in season to bid; the catalogues, instead of being an aid, operated as a blind. It is apparent to the mind of this deponent, that the order of arrangement in the catalogue was calculated to confuse the ideas of those wishing to bid, and the departure from that order by the auctioneer, together with the extreme rapidity of the sale, had the effect of making the confusion worse confounded, except, however, as to those parties previously advised of the course to be pursued, if such there were. As the auctioneer generally struck off the assortment, covering many pages of the catalogue immediately after it was announced, it was, in many instances, impossible to turn over the leaves of the catalogue and ascertain what were the lots or blocks put up for sale before they were struck off; and when the auctioneer was remonstrated with and requested to renew the sale on a further bid, he refused to do so. The system pursued at the sale, in reference to most of the property sold, was calculated to prevent all persons, not previously made acquainted with the programme, from bidding understandingly. These large assortments sometimes included smaller ones, which, as represented in the catalogue, were put up for sale on account of former purchasers, who had forfeited or were said to have forfeited by not making payments, and were sold by the lump at a uniform price of a certain number of dollars for each lot. In these instances, the names of the parties on whose account they were sold, were not mentioned; it thereby became impossible to apportion the amount of credit to be given to each party on whose account they were sold, the different lots many of them differing widely in value. Lots were put up in the same large assortment, situated in various parts of the city, on the South Beach, on the North Beach, in the Government Reserves, on or near Market street, Jackson street, Sacramento street, Mission street, Simmons street, on South Beach, North Point and Leavenworth streets, North Beach, Broadway, Pacific street and other streets too numerous to mention, which lots were intermingled without reference to any system or method appreciable by this deponent, and differed widely in value, varying from five or ten dollars to upward of a thousand dollars, and were claimed or owned by a large number of different persons under city titles, or under Government Reserve leasehold titles, except some few which the city may not have previously disposed of, and were all sold in one lump at an insignificant price per lot.

As an instance of which, deponent specifies one batch or assortment, extending from catalogue numbers three hundred and sixteen to three hundred and ninety-nine, inclusive. The lots included are situated in the various parts of the city above stated, and were mentioned in the catalogue as sold on account of many different parties, and were of various widely differing values. The principal object of deponent in attending the sale was to buy in the State's title to several of these lots, in which he claims to have an interest under a title derived from the City of San Francisco. This batch was put up and at once struck off for the price of ten dollars each lot, to Mr. Brown; who Brown is, the deponent is not

informed. He has made some inquiry, but has been unable to ascertain the real existence of a purchaser of said property bearing that name. The sale was made with such haste, that the deponent was unable to turn over the leaves of the catalogue with sufficient rapidity to ascertain what property was embraced within these catalogue numbers before it was struck off (the description covering some seven pages of the catalogue). Immediately, within a few seconds, after the property was struck off to Brown, and before the auctioneer had proceeded to another sale, the deponent, in a loud tone of voice, notified the auctioneer, Mr. Selover, that he advanced the bid twenty-five dollars, making a bid of thirty-five dollars on each of the lots just struck off, and demanded that the sale should be opened and proceed on his (deponent's) bid. The auctioneer refused to comply with deponent's request, saying that deponent's bid was too late. When the lots were struck off to Brown, deponent did not hear any one bid; after the sale, deponent asked the auctioneer, Mr. Selover, who was the purchaser of the last above-mentioned lots; he said Col. A. J. Butler. Deponent told him he struck them off to Brown; Selover said that deponent was mistaken.

The aggregate amount of the pretended sale of the last-mentioned batch, is at ten dollars per lot, eight hundred and fifty dollars or thereabouts. The deponent has bought and sold real estate in the City of San Francisco; is well acquainted with the location and value of real estate in said city. It is difficult to estimate with accuracy the value of the State's title. It is the deponent's opinion, after consultation with others skilled in the value of real estate, that the State's title to the last-mentioned batch of lots, would, at a fair auction sale, with unrestricted competition in bidding, have produced not less than ten thousand to twenty thousand dollars.

The property known as the City Slip Lots, one hundred and twenty-two in number, numbered on the Catalogue from one to one hundred and twenty-two, was struck off with the same extraordinary haste, at fifty dollars per lot, to one Calloway or Galloway, as deponent understood the name. Deponent heard no bid whatever made for these lots. These lots are valuable property, and the State's title to them is, in the opinion of the deponent, worth a much larger sum. Some few lots were sold individually or in small assortments, and proper competition in bidding on some of them allowed; but the larger portion of the sale was conducted in the hasty, confused manner above described, without allowing competition in bidding, and in a large number of instances, without giving those gentlemen present holding or claiming the property sold, under city or other titles, an opportunity to bid. In deponent's opinion, the whole sale should have produced from one hundred thousand to two hundred thousand dollars. Deponent has attended most of the State Sales, and never saw one conducted in such a manner as that of the tenth of October last. This was, for the most part, not an *auction* sale, if the term signifies fair opportunity to bid and free competition in bidding. Deponent had a conversation with Mr. Selover some days after the sale. He remarked that this (referring to the sale) was pretty sharp practice, a little the sharpest he had ever done, or words to that effect. Mr. Selover, also, in a conversation with the deponent in reference to this sale, said that the real estate business from the beginning in San Francisco, had been a game of sharps; that he was about as sharp as anybody; that there were persons at the sale that he meant to get even with, and he had got even with them. Mr. Selover disclaimed any allusion to the deponent in this remark, but said he referred to other parties. The deponent has never had any personal difficulty or quarrel with Messrs. Selover & Sinton, or either of them, and in giving this testimony is not actuated by feelings of a personal character against them, but regards it as a public duty that he should testify before the Legislative Committee appointed to investigate this sale. The matters and things

above stated are true according to deponent's best knowledge, information and belief.

Subscribed and sworn to this 18th of February, A. D. 1856, before me,

JAMES H. BRISTOW, Notary Public.

TESTIMONY OF JOEL S. POLACK.

STATE OF CALIFORNIA, City of San Francisco:

Joel S. Polack, a resident of said city, being duly sworn, deposes and saith:

That he attended the sale of the State's interest in the water lots of this city, on the 10th October last.

That some days previously to the sale, deponent called on Selover & Sinton, the auctioneers, for a catalogue of said sale; Mr. Sinton replied that they were printing at Sacramento, by order of J. S. Cohen, the agent for the Commissioners, who had taken the printing out of their (S. & S.'s) hands to serve some political friends. Deponent until the day of sale repeatedly saw Mr. Sinton, who always stated that the catalogues had not arrived from Sacramento; and two days before the sale Mr. Sinton added that he feared that they would not arrive in time, and they (Selover & Sinton) would be obliged to have slips struck off from the *Herald* office.

On the morning of the sale, at 9 o'clock, A. M., no catalogue was to be had. Mr. Sinton's excuse was, they were being sewed. They were first produced, about half-past ten—an hour and a half before the sale. On obtaining one, deponent found, by the imprimatur, that they had never seen Sacramento, but had been printed at the office of the *Times and Transcript* newspaper, at Sacramento street in this city.

At twelve o'clock exactly the sale commenced. The first one hundred and twenty-two lots, comprising the whole city slip property, on Long Wharf, Davis and Clay streets, originally sold by the city to upwards of sixty purchasers, were within a minute or so knocked down in one batch to a single purchaser. The auctioneer deprecated any one bidding on those lots, as he wanted the parties, he said, who had purchased the former title to have also that of the State. The price was fifty dollars per lot.

Deponent believes that, had the said lots been put up singly and had time been given for public competition, they would have averaged at least one thousand dollars per lot, as the several owners would have obtained the title to the fee for scrip, or sixty-five cents on the dollar—that is, six hundred and fifty dollars each.

The lots were sacrificed for $6,100, when a fair competition would have freed the State of $122,000 of indebtedness.

The auctioneer then skipped over several pages of the catalogue, with such velocity that before this deponent, who is tolerably versed in the handling of leaves, could ascertain the page referred to by the auctioner, the lots were knocked down before any intending purchaser knew what to bid, or which lots he was to bid for, unconnected with what deponent believes to have been an illegal com-

bination, comprising J. S. Cohen, Agent of the Commission, Andrew Jackson Butler, his fellow clerk in said Commission, and the auctioneer.

On deponent bidding on one of the batches of lots, the auctioneer stated that he was instructed by Mr. J. S. Cohen, the Agent of the Commission, not to take the bid of deponent, or that of any person who had not paid up all indebtedness to the State.

Deponent had paid up all indebtedness, except an amount equal to what the State is indebted to deponent, the State having sold lots to deponent that have been adjudged by the U. S. District Court of this city not to belong to her. But deponent believes the sole reason of said auctioneer, in conjunction with Cohen, in preventing deponent bidding for and protecting his property was, that deponent had already paid Selover & Sinton upwards of eleven hundred dollars for a single deed that was to have been made for his lots; but the auctioneer expected to reap a further sum of $1,100 from a new purchaser, and that he could not expect a duplicate amount from deponent, who after the sale demanded from said auctioneer the return of said amount, but deponent was told to go to law and obtain it, as he (the auctioneer) would not return a dollar.

During the sale, in several instances, upwards of one hundred lots were hastily called, and within a minute or so knocked down to the name of Brown—though in the sales book the name of Andrew Jackson Butler was inserted instead, as A. J. Butler, who deponent believes was at this time a fellow clerk with J. S. Cohen in the office of the State Land Commissioners.

The pages of the catalogue were turned back again, and with the same velocity eighty-three lots, from Nos. 316 to 399 inclusive, were hastily called out, and as hastily knocked down, at ten dollars each, to Brown *alias* A. J. Butler. The first three lots of this last batch, Nos. 316, 317 and 318, had been sold to deponent by Selover & Sinton, and the deed delivered to him by the former Commissioners, and were of small value; but among these eighty-three lots, thus sacrificed for $830, one-half of them had netted at former sales, when sold singly and honestly, full $20,000. And there were several intending purchasers at the sale, ready to offer on a single lot more than the eighty-three were sacrificed to Butler for, yet they were prevented bidding, for as the auctioneer was dropping his hammer, Mr. William H. Clark raised the bid, but the auctioneer refused to take it. Instantly Mr. Clark bid twenty-five dollars, at which amount the law constituting the Commission makes it imperative on the auctioneer to re-open the bid; but he refused to do so. Mr. Clark then protested against the illegality of the sale.

These last eighty-three lots comprised the most valuable lots of all that had been sold on account of previous purchasers. The property of twenty-one different purchasers were thus jumbled together, besides other unsold lots; and in no instance did the auctioneer state on whose account they were sold. The catalogue had been made up for the purpose of this wholesale plunder; for the lot comprised several on North Beach, South Beach, Stockton, Sansome, Battery, Front, Davis, Drum, Vallejo, Pacific, Jackson, Market, Mission, Harvard, Folsom, First, Stuart and Spear streets; also one-hundred-vara lots, fifty-vara lots, and the usual water lots. All these became the spoil of A. J. Butler for ten dollars each.

On the lots on Montgomery street being offered, the auctioneer was greatly annoyed at the spirited bidding, and frequently stopped to tell the audience that they surely did not know what they were bidding for, that it was the State's interest for ninety-nine years hence, and used every unfair means to prevent the bidding on those lots.

The sale comprised eight hundred and sixty-seven lots of some of the most valuable property in the city, and excepting a few isolated lots, in which the auctioneer felt no particular interest, the sale was hastily slurred over, at the rate of about

twenty lots per minute—the sale commencing at twelve, M., and finishing at a quarter to one—in all, forty-five minutes.

The sale was conducted in an illegal and improper manner. The lots were principally knocked down to Brown, *alias* A. J. Butler, and the fictitious sale conducted under the auspices of J. S. Cohen, his fellow clerk and agent to the Land Commission for the sale of the State's interest. The lots were sold in batches of from eighty lots and above.

The auctioneer has since stated to deponent that the reason why the name of Brown was given instead of Butler, was that Butler was insolvent and that judgments were recorded against him to a large amount. The auctioneer made no secret of his reason for his conduct at the sale; he stated to deponent that it was the last opportunity he should ever have to make a good thing, and that he should go in for it.

Deponent also believes that the former purchasers at the sale of the State's interest, etc., are not alone the victims to this fictitious sale, but that the State has been equally swindled in the accounts of charges. In proof, deponent would adduce the auctioneers' charge of two thousand dollars for advertising said sale in the city paper called the *Echo du Pacifique*, the agents of that paper receiving little more than ten per cent. on that amount; in short, the auctioneer charges the State $2,000, where he scarcely paid $250.

In conclusion, deponent avers that among the many land sales he has witnessed, he never saw one conducted in the illegal manner as the sale in question; that it was not conducted for the benefit of the State, but deponent believes solely for the interests of the auctioneer, the agent of the Commission, and the clerk of the same. Deponent also believes, that by this disgraceful sale, the State was a loser of from $150,000 to $200,000; for whenever the auctioneer dwelt on lots in which he felt no interest, a large price was obtained.

That deponent believes that to give validity to the aforesaid sale, would cast an indelible stain on the honor of the State; and it is hoped that the Honorable the Legislature will declare said sale invalid, and will pass a resolution enabling the present Board of Commissioners to settle with all outstanding claimants in a just and equitable manner.

Deponent also avers that the State sales have always been conducted with marked partiality by the auctioneer, though *most honorably* by the former Board of Land Commissioners, as the property of the private friends of the auctioneer was hastily passed over, and any persons bidding on such lots were always frowned upon, and in more than one instance, brow-beat by the auctioneer, who nevertheless dwelt long enough on the lots of those toward whom he felt no such sympathy.

Deponent avers that the law of May 1st, 1855, forming the present Commission only allows the State sales to be advertised in five (5) city papers, whereas the sale of the 10th October last was advertised in nine (9) papers, and in an elaborate, unnecessary and wholly unusual and most expensive manner; and deponent believes that this express departure from the law was for nefarious reasons, as in the case of the paper called the *Echo du Pacifique*.

In the case of Benjamin Richardson, no less than one hundred and thirty-two of the lots on which he had paid two installments, and had offered the third and last installment, but it was refused to be taken, as Richardson repudiated the idea of paying the extortionate amount of $1,980 for a single deed for said lots. The one hundred and thirty-two lots were sold in one batch within the space of one minute to the omnivorous A. J. Butler, under the usual assumed name of Brown.

The sale of lots on account of former purchasers was also illegal, as the present Board of Commissioners had only authority to sell such lots as remained unsold on the first day of May, 1855.

Against the former purchasers who refused to settle up in full, the State had its proper remedy, which it had already resorted to in several cases.

J. S. Polack, being duly sworn, says that he has read the foregoing statement, by him signed, and knows the contents thereof; that the same is true, of his own knowledge, and to the best of his belief.

J. S. POLACK.

Subscribed and sworn to this 11th day of February, 1856, in presence of

Jno. D. Scellen.

TESTIMONY OF HENRY F. JOSEPH.

Henry F. Joseph, being duly sworn, doth depose and say, that he is a resident of San Francisco; was present at the sale of the 10th of October last; came into the room where the auctioneer, Mr. Selover, was about selling lot number five hundred; was requested by Mr. Richardson to watch when his property was sold, and to buy in the State's interest. I waited until the sale had got down to the number just preceding Mr. Richardson's, on the catalogue. Mr. Selover then skipped over all that of Mr. Richardson's, and commenced on another page; he remarked that they were nearly at the end, and the sale would close. Mr. Richardson's lots on the catalogue ranged from seven hundred and nineteen to eight hundred and forty-nine; my impression is that these lots must have been sold out of this order, as I watched the sale attentively, and could not find that they were offered.

TESTIMONY OF JAMES T. McDOUGAL.

James T. McDougal being duly sworn, doth depose and say: I reside in San Francisco; was present at the sale of the interest of the State of California in water lot property in the City of San Francisco, on the 10th day of October, 1855, at the auction room of Selover & Sinton, San Francisco; think that certain property was there sold contrary to the usage of auctioneers, and contrary to law; as an instance, the sale did not take place in accordance with the order mentioned in the catalogue of sale; property embraced in number three hundred and sixteen of the catalogue, was put up and bid off, with the privilege on the part of the buyer of taking lots, if he desired, to number three hundred and ninety-nine of said catalogue. They were put up in a hurried manner, so that a person could not bid understandingly; between the numbers mentioned were lots and blocks of land of great inequality of value, some particularly valuable in the Government Reserve, bounded by Jackson, Oregon, Davis and Front streets; in

one of the lots, bounded by the streets just mentioned, the State's interest was worth about $1,000; another lot in the reserve, bounded by Jackson, Oregon, Drumm and Davis, was worth $1,000; there were lots bounded by Market, Spear and Main streets worth each about one hundred dollars. The purchaser of number three hundred and sixteen took all the lots to three hundred and ninety-nine, inclusive, at ten dollars per lot. The sale was conducted so rapidly, and lots struck off so quickly, that one not posted, and on the scent, had no chance of bidding. After the aforesaid lots were struck off, and within a few seconds an additional bid of twenty-five dollars per lot was offered, which the auctioneer refused to take. The auctioneer upon the occasion was A. A. Selover; the whole sale, embracing upwards of eight hundred lots, was made in less than an hour; was a bidder at the sale, and purchased a few lots; had an interest (the city title,) in some of the property specified in the catalogue, between three hundred and sixteen and three hundred and ninety-nine; was not a bidder for any of the lots between the aforesaid numbers; felt desirous of doing so, but had no opportunity, owing to the manner in which the property was struck off; think I never had a quarrel with Mr. Selover; I have had some conversations with him touching the sale, and expressed the opinion that it had not been conducted fairly; he replied, saying that it "was sharp practice, the sharpest he had ever had in his shop;" never had a difficulty with the recent Board of Commissioners, but had some difference as to the amount of land to be included in a deed from them to me, in consequence of a bid of mine; am a merchant; my only motive in appearing before the Committee is to perform what I consider the duty of a good citizen, by aiding to correct abuses.

STATEMENT OF JAMES B. TOWNSEND.

I was present at the sale made on the 10th day of October, 1855, by the State Land Commissioners, at the office of Selover & Sinton, who were the auctioneers; I came a few minutes after twelve o'clock, and the sale was already commenced; I had one of the catalogues in my hand, and endeavored to find the lots which the auctioneer, Mr. Selover, was selling. I soon discovered that he was not selling the property in the order in which it was placed in the catalogue, but jumping from place to place, and so rapidly, that I was generally unable to find the lots that he was selling before they were knocked down. Others who stood about me made the same complaint, and pronounced the sale a swindle. The lots were not sold singly, but a large number, often I believe as many as ten, twenty, and probably thirty or forty, together; they were sold at so much per lot. I noticed that the auctioneer sold very rapidly, dwelling but a very short time on the lots when up. I noticed, also, that most of the lots were knocked down to the names of a few persons who apparently stood about the auctioneer.

The lots contained in the block bounded by Montgomery street on the west, Sansome street on the east, Jackson street on the north and Washington street on the south, I had no knowledge was to be sold until the morning of the sale, when I saw it in the catalogue. I had called at the auctioneers' rooms for a catalogue a day or two before, but was unable to get one, and was told they had not yet come from the printer's. This sale had been advertised in the *San Francisco*

Herald from about the 23d of September until the day of sale, but the lots in this block were not contained in the list advertised in that paper.

Before putting up the lots contained in this block, Mr. Selover stated to his audience that the only interest which he was about to sell in these lots was the State's reversion after ninety-nine years; that the matter had been to the Supreme Court, and that the Court had so decided; that he made this statement in order that the purchasers might be aware of what they were buying. The auctioneer then commenced crying these lots one at a time. They seemed to me to be knocked down with unusual rapidity, and I think, in several instances, before the bidding had ceased; once, certainly, during the sale of these lots, the auctioneer stopped, and stated in substance that he thought the parties bidding could not be aware of the condition of the property and of what they were bidding on. He *seemed* to me to be dissatisfied that the lots were being run up so high. A friend of mine, Judge John McHenry, had a claim of title upon three of these lots, and for that reason, principally, I myself bid upon at least two of these lots, and until I was satisfied that bidding was useless. I run one of these lots up to some six hundred dollars, when it was knocked down to another person, as I thought, without the auctioneer's turning to take any further bids from me. I protested aloud against their being knocked down before I had done bidding, which was done in regard to some of them. They were sold with unusual rapidity, and I think all knocked down to the same person. I did not persist in having the bidding reopened after they were knocked down, as I should have done had I not *supposed* they were being bought in for the persons in possession. How this was, in fact, I know only from what I have heard. I would have bid for several of the lots more than they were knocked down at had any bids been taken, and the sale conducted with the usual deliberation, and an equal opportunity afforded for all to become the purchasers. Toward the close of the sale of the lots in this block, two, and in one instance I believe, three full original sized water-lots were sold together and knocked down at the same bid. I think these lots would have brought much higher prices had they been sold in the ordinary way. I supposed that the putting up two and three in the lump was to prevent competition. I thought at the time and still think, that the sale was conducted with gross and palpable unfairness and impropriety.

J. B. Townsend, being duly sworn, says: That he has read the foregoing statement and knows the contents thereof, that the same is true of his own knowledge except as to the matters stated therein on information and belief, and as to these matters he believes it to be true.

TESTIMONY OF GEORGE SIMPTON.

I, George Simpton, solemnly swear, that I was appointed by Messrs. John C. Hayes and Ira Munson to act for them and purchase in their names the interest of the State of California in and to a certain lot, numbered in the catalogue 454, and described as follows:

"Commencing on the north line of Oregon street, ninety feet east of Davis street, thence east thirty feet front, by sixty feet in depth."

That I attended the said sale made by Selover & Sinton, in the City of San Francisco, on or about the tenth day of October, A. D. 1855: that I made three distinct bids for the same, all of which were in an audible tone of voice, and were heard by the by-standers: that the last bid made on said lot was by me, and for the sum of eleven hundred dollars: that the lot was knocked down to Dr. Coryell: that I claimed the bid of Mr. A. A. Selover, before he had time to put up another lot; that I remonstrated with the said Selover, to no purpose.

I furthermore swear, that the said lot is held in trust by Messrs. Hayes & Munson for the benefit of my children, and that the said lot, exclusive of the last sale of the State's interest, has cost the sum of two thousand dollars, and paid by the said trustees, Hayes & Munson, and held in trust for the benefit of my children.

George Simpton, being duly sworn, deposes and says, that he has read the foregoing statement, by him signed, and knows the contents thereof, and that the same is true.

TESTIMONY OF R. H. SINTON.

County of San Francisco:

R. H. Sinton, of said county, being duly sworn, deposes and says: That he is a member of the firm of Selover, Sinton & Co.

That said firm acted as the auctioneers who conducted the sale of the State's interest in certain property in the City of San Francisco on the tenth day of October, 1855. That said sale would take place on that day was a fact of the greatest notoriety, as the same was fully and particularly advertised in the public newspapers for —— days previous thereto, and catalogues freely circulated on the day of sale, containing a full description of all the property sold.

That it was this deponent's duty to reduce the contract of sale to writing, that is, to note the names of the purchasers and the price paid for the respective lots as sold; and for that purpose he stationed himself by the side of Mr. A. A. Selover, and deponent did not leave his position for a single moment during the entire sale; and at no time during said sale did this deponent find the least difficulty to keep the run of the lots, or to keep pace with the auctioneer, or to note said contract of sale as aforesaid at the proper time.

And deponent further says, that said sale was conducted with all the formalities and precision of any previous State sales, and that all persons who attended said last sale had an equal opportunity for purchasing, except the former delinquents, whose bids the auctioneers were ordered by Mr. J. S. Cohen, State Agent, not to be taken. That none of said delinquents, to the knowledge of deponent, offered to bid at said sale, except S. C. Hastings, whose bid was refused, in pursuance of before-mentioned order.

And deponent further says, in proof that no undue haste or rapidity was used in conducting said sale; that said sale, comprising about eight hundred and fifty lots, occupied about one hour; that sale of the 26th of October, 1854, comprising nearly sixteen hundred lots, occupied just two hours; that sale of the 18th of January, 1855, comprising twelve hundred lots, occupied scarcely one hour and a half.

That said sale in question should not have taken as much time as the others, from the fact there were not so many lots sold, and that nearly all, or a greater

portion, were lots re-sold on account of a small number of delinquent purchasers at former sales; and the mode adopted on this occasion, as customary in such cases, was to classify the lots of each delinquent purchaser; then put up one lot of a block (usually the corner lot), with the privilege of the rest, and as often as the purchaser exercised the privilege it necessarily shortened the time that would otherwise be consumed if the lots had been sold separately.

This mode of selling, instead of producing an injury or loss to the State, tended, in deponent's opinion, to benefit her; and deponent's reasons arise upon the following state of facts:

It is well known that there are conflicting claims or titles to much of the water lot property in San Francisco, and also that there was an existing feeling in the community to favor those who were supposed to be the real owners under the city, which feeling prevented all adverse bidding, very frequently, and the owner—real or supposed—got the lot at his own bid, which was frequently merely nominal; but by putting up the best lot in a block or batch, with the privilege of the whole, the field for competition was opened to the capitalists and operators in real estate, who bid freely on the property, without reference to the sympathy of the claimant or his friends.

This deponent further says that his opinion is not founded upon reasoning merely, but upon the following facts:

The first batch offered at sale in question was the lots known familiarly as the "city slip lots," which brought fifty dollars each. These lots are each nearly twenty-five feet by sixty feet, or say 1,500 square feet.

The water lots on the opposite sides of this property, that is, on Clay street on the north and on Sacramento street on the south, (in fact the following applies to all the old water lots on the east side of the city), sold on the 17th of August, 1854, (when real estate was commanding far higher prices than when this sale took place) for one hundred dollars each. These lots are all 45 ft. 10 in. by 137 ft. 6. in., or say 6,300 square feet—more than four times as large as the city slip lots;—yet, it will be seen that two city slip lots, (not one-half of a water lot) brought the same sum that more than four times the same amount of land on opposite side of same street brought; the obvious reason being as before stated, that claimants bought at first sale, and the public at the second. That the State was the gainer by the mode of conducting last sale is apparent.

And the deponent further says, that Judge Hastings, Dr. Coryell, and others, paid higher prices for lots on the "Government Reserve" than lots so situated ever brought before.

And this deponent further says, that the one hundred and thirty-two lots, styled as the "B. Richardson lots," are situated in what is known as "Mission Bay," and are and were in October, 1855, almost wholly worthless. Previous to the sale in question, these lots were offered at public sale several times, without a single bid being obtained at any price; yet, at the sale in question, these lots brought ten dollars each. At the sale that took place the year previous, these lots brought just twenty dollars each; but at that time this property was looked upon as having a real and considerable value. Had the former delinquent been allowed to bid as owner on these lots, this deponent believes that the State would not have realized five dollars each.

And this deponent further says, that the same remarks apply to the "Polack batch," for the number and nature of which see annexed catalogue.

And this deponent further says: that J. T. McDougal and Clark are bitterly hostile to the members of the late firm of Selover & Sinton, and that said enmity arose in the following manner: Said McDougal, having purchased large batches of lots at State's sale of the 18th of January, 1855, in connection with said Clark, at sundry times endeavored to get deponent to draw the deed in such a manner

as to include not only said large batches, but also an immense and indefinite tract of land adjoining said large batches, which deponent refused to do. After leaving deponent, said McDougal and Clark endeavored to persuade Major John S. Love to allow the deed to contain the desired description; this deponent again thwarted said McDougal and Clark, by calling the attention of Major Love to the impropriety of carrying out said design. That deponent verily believes that said McDougal and Clark entertain feelings of bitter personal enmity against Mr. A. A. Selover, and that they would eagerly seize upon any pretext to work an injury upon said Mr. Selover and deponent.

And deponent further says, that said Polack entertains great personal hostility towards deponent and his partner. In his evidence before the Superior Court, in the case of Richardson *v.* Bigler and others, said Polack swore to about the same thing as contained in his affidavit, evincing much feeling during the whole time.

And deponent further says, that said Polack's enmity and ill-feeling against the firm of Selover & Sinton, arose entirely, as deponent believes, from a refusal to pay back about eleven hundred dollars, paid by him to deponent's firm for deeds and commissions; which services were actually rendered to said Polack, but he, having afterwards become delinquent, demanded a return of said money; and deponent's firm, deeming said Polack not entitled to the same under any circumstances, refused to refund the same unless compelled by law; and since that refusal said Polack has taken no legal steps to enforce payment.

And this deponent further says, that said McDougal and Polack have been in the habit of purchasing batches of lots at previous State sales, and he never before heard that either of them found fault at what they now term the "batch system," or the manner said sale was conducted.

Sworn and subscribed to before me, this twenty-third day of February, 1856.

JAMES H. BRISTOW,
Notary Public.

TESTIMONY OF CHARLES C. BOWMAN.

COUNTY OF SAN FRANCISCO, ss:

C. C. Bowman, of said county, being duly sworn, deposes and says: That he has attended every State sale that has taken place in the City of San Francisco, and that deponent was a purchaser at most of such sales; that at the last sale deponent remained during one-half or two-thirds of the whole sale; that said sale was conducted with the greatest fairness, and with all necessary deliberation on the part of the auctioneers, and every opportunity was offered to bidders; that deponent had no difficuly to follow the auctioneer, or to make his bids, which were readily taken, and deponent had no privileges different from any of the persons attending said sale, and for aught this deponent could see or learn, said sale was conducted like all other previous State sales.

Subscribed and sworn to, this nineteenth day of February, 1856, before me,

H. A. COBB,
Notary Public.

TESTIMONY OF EDWARD JONES.

Edward Jones being duly sworn, deposes and says: That he attended the public sale of State's interest in water lot property, (conducted by Selover, Sinton & Co., auctioneers,) on the tenth day of October, 1855; that deponent has attended several State sales, all of which were conducted in the same manner as that of the tenth of October, 1855; that all of said sales have always been conducted in a fair and impartial manner; and that all persons wishing had ample opportunity to bid; that deponent particularly recollects the sale of the block bounded by Montgomery, Jackson, Sansome and Washington streets; that the same was put up by *single* lots, and the bidding became very animated, and created much excitement; that each and all the lots in said block were struck down to J. R. Coryell at prices in my opinion far above what I believed to be the value of the State's interest in the same.

Sworn and subscribed before me, this twenty-sixth day of February, 1856.

H. A. Cobb,
Notary Public.

TESTIMONY OF JOHN SATTERLEE.

State of California, County of San Francisco, ss:

John Satterlee being duly sworn, deposes and says: That he was present at the sale of the interest of the State of California in certain property in the City of San Francisco, made by the State Land Commissioners on the tenth day of October last; that the interest of the State in the lots bounded on the north by Clay street, on the west by Davis street, on the south by Sacramento street, and on the east by East street, known as the City Slip Property, was sold at said sale for fifty dollars each lot. This deponent says that in his opinion the value of the interest in any one of said lots acquired by any purchaser at said sale did not exceed the amount bid.

Subscribed and sworn to before me, this twenty-third day of February, 1856.

Robert Rogers,
Notary Public.

TESTIMONY OF P. WARREN VAN WINKLE.

P. Warren Van Winkle being duly sworn, deposes and says: That he attended the sale of State's interest in water lot property sold at public auction by Selover, Sinton & Co., on the tenth day of October, 1855; that deponent attended said sale as one of the executors of the last will and testament of J. S. Folsom, deceased, for the purpose of purchasing the State's interest in certain water property belonging to the estate of said Folsom, deceased; that the sale was fairly and openly conducted; that deponent paid the sum of fifty dollars per lot for said property, which in deponent's opinion was more than the interest of the State in the same was, or is now, worth.

Sworn and subscribed before me, this twenty-fifth day of February, 1856.

H. A. Cobb,
Notary Public.

TESTIMONY OF H. A. COBB.

H. A. Cobb, of said county, being duly sworn, deposes and says: That deponent was present at the sale of the tenth of October, 1855; that said sale was conducted with the utmost fairness and deliberation, affording to all persons, except delinquents, an equal opportunity for bidding; that deponent further says, that on several occasions there were several claimants to the same property sold, and the same was invariably re-sold, that all might be satisfied; that deponent followed the auctioneer with the utmost facility in all parts of said sale; that deponent is acquainted with the value of the State's interest, and in deponent's opinion the same brought its full value.

Subscribed and sworn to, this twenty-second day of February, A. D. 1856, before me,

James H. Bristow,
Notary Public.

TESTIMONY OF H. C. PARTRIDGE.

County of San Francisco, ss:

H. C. Partridge, of said county, being sworn, says: That he was present at the State sale that took place on the tenth day of October, 1855; that said sale, in deponent's opinion, was conducted with the utmost fairness and deliberation on the part of the auctioneers; that deponent had not the least difficulty to follow the auctioneer; and that said sale was conducted in every respect like other sales of real estate; and deponent further says that he remembers distinctly when the property was sold, as is claimed to have been struck off to Brown, and entered in sales-book to Butler; that deponent heard the auctioneer take the name of the purchaser, and heard the purchaser give his name as Butler, and not as Brown, as is alleged.

Sworn to, this twenty-third day of February, 1856, before me,

James H. Bristow,
Notary Public.

TESTIMONY OF T. C. GILMAN.

County of San Francisco, ss:

T. C. Gilman, of said county, being sworn, says: That he attended the State sale on the 10th day of October, A. D. 1855. That said sale was conducted in a fair, open and deliberate manner. That deponent was a bidder, and made his bids without difficulty. That deponent attended previous State sales, and he noticed no difference in the manner said sale was conducted to the former sales. And further, the deponent says not.

Sworn to, before me, this — day of February, A. D. 1856.

H. A. Cobb,
Notary Public.

TESTIMONY OF E. T. CRANE AND OTHERS.

County of San Francisco, ss:

The undersigned, residents of said county, being severally duly sworn, each for himself, deposes and says: That he is the holder of the State's interest in and to lots in the property known as the "City Slip Lots," in the City of San Francisco, which interest the State sold on the 10th day of October, 1855. That deponent has acquired his said interest since said State sale, and paid for the same the price per lot for which said property sold at said sale, to wit: fifty dollars.

That deponent neither, at the time of the said sale, nor at the time when he paid his money and took his deeds for said land, had heard that the said sale of the above-mentioned property was in any way impugned or questioned for fraud or irregularity, and that he took his deeds for said land in the full belief that said sale was regular, and that he acquired thereby the interest of the State.

And deponent further says, that the price paid for each of said lots was fifty dollars; that he then believed, and still does believe, the said price to be at least as much as the State's interest in said lots was, or is, worth, and was the utmost that they would have been willing to give for the same.

And deponent further says, that he is advised by Counsel that he has a good title, under any view of said sale—he being an innocent purchaser in good faith, and he asks that the action of the Committee will not create a cloud upon his said title.

E. T. CRANE,
LOUIS J. FORD,
EDWARD MARTIN,
DAVID C. McCARTHY.

Subscribed and sworn to before me this 25th day of February, 1856.

James H. Bristow,
Notary Public.

TESTIMONY OF THOMAS J. SMILEY AND FREDERICK COLLIER.

County of San Francisco, ss:

Thomas J. Smiley and Frederick Collier, residents of said county, being severally duly sworn, each for himself deposes and says: That he is the holder of the State's interest in and to lots in the property known as the "City Slip Lots," in the City of San Francisco, which interest the State sold on the tenth day of October, 1855. That deponent has acquired his said interest since said State sale, and paid for the same the price per lot for which said property sold at said sale, to wit: fifty dollars. That deponent never heard said State sale impugned or questioned on any grounds, and deponent took his deed for the same with the full belief that

said sale was regular in every respect, and without the least suspicions of any fraud whatever. And deponent believes at this time that said sale was regular and fair in every particular, and that the State's interest in this property brought its full value.

And deponent further says, that he is advised by counsel that he has a good title under any view of said sale, he being an innocent purchaser in good faith; and he asks that the action of the Committee will not create a cloud upon his said title.

Sworn to and subscribed before me,

H. A. COBB,
Notary Public.

TESTIMONY OF FERDINAND VASSAULT.

County of San Francisco, ss:

Ferdinand Vassault, of said county, being sworn, deposes and says: That he has attended the several sales of the State's interest in property in San Francisco. That deponent was present at the sale of the 10th of October, 1855; that said sale was conducted with the utmost fairness and deliberation, affording to all persons, except delinquents, an equal opportunity for bidding; that on several occasions there were several claimants to the same property sold, and the same was invariably resold, that all might be satisfied. That deponent followed the auctioneer with the utmost facility in all parts of said sale. That deponent is acquainted with the value of the State's interest, and, in deponent's opinion, the same brought its full value.

Subscribed and sworn to before me, this 22d day of February, A. D. 1856.

D. B. Hempstead,
Notary Public.

TESTIMONY OF R. A. FISH.

County of San Francisco:

R. A. Fish, of said county, being duly sworn, says: That deponent has attended all the various State sales that have taken place in the City of San Francisco, and he is very familiar with the manner said sales were conducted.

That at the sale of the tenth day of October, 1855, he acted as the auctioneer's clerk on that occasion, and it was his duty to note the history of said sale, that is,

the names of the purchasers and the prices paid for the respective lots as sold; and for that purpose, deponent was stationed near the auctioneer, which position deponent kept through the whole sale; and at no time did deponent have the least difficulty to keep the run of the lots as sold, or to keep pace with the auctioneer, or to note the contract of sale at the proper time.

And deponent further says, that the various sales of lots, the names of the purchasers, and prices paid, were entered by deponent as announced audibly in the presence of the audience at said sale.

And this deponent further says, that said sale was conducted with all the formalities and precision of any previous State sale, and all persons had an equal opportunity for purchasing, except the former delinquents, whose bids were to be refused, by order of State agent, if made: that there was no undue haste or rapidity in conducting said sale.

And deponent further says, that he knows that J. T. McDougal is bitterly hostile to Selover & Sinton, and he believes that such feeling arose from the fact that said Selover & Sinton thwarted said McDougal from obtaining a deed to property from the Commission, that he was not entitled to.

And deponent further says, that he is aware of the fact that J. S. Polack is hostile towards Selover & Sinton.

Sworn to this sixteenth day of February, 1856, before me,

CHARLES HALSEY,
Notary Public.

TESTIMONY OF CHARLES D. CARTER.

COUNTY OF SAN FRANCISCO:

Charles D. Carter, of said county, being duly sworn, deposes and says:

That he is a real estate broker, and has been engaged in said business in the City of San Francisco for three years last past.

That this deponent was present at the sale of the State's interest, held on the tenth day of October, 1855.

The object of this deponent attending said sale, was to purchase the State's interest in certain lots in the plat known as "City Slip Property," which deponent then claimed under title from the City of San Francisco. This deponent expected that he would be able to purchase said State's interest for ten dollars each; but deponent did not purchase, because said interest brought more than deponent anticipated, and more, in deponent's opinion, than said interest was worth.

That during the sale of said slip property there was more than usual deliberation, and an equal opportunity given to the speculator and the owner under the city, which course was unsatisfactory to deponent, and he left after these lots were sold.

And deponent further says, that as far as he could discover, the sale was conducted with all fairness on the part of the auctioneers; and deponent, during all his stay at said sale, heard no dissatisfaction expressed.

That deponent is well acquainted with the value of property in San Francisco,

and particularly the State's interest therein; and that the price said interest brought was much greater than the actual present value of said interest; and deponent believes that said price was commanded more by the manner the said sale was made than by any thing else.

Subscribed and sworn before me, the twenty-second day of February, 1856.

JAMES H. BRISTOW,
Notary Public.

TESTIMONY OF WILLIAM F. McLEAN.

COUNTY OF SAN FRANCISCO,:

William F. McLean, being duly sworn, deposes and says:
That he was present during the State sale held on the tenth day of October, 1855. That said sale, in deponent's opinion, was conducted with all fairness and necessary deliberation, affording an equal opportunity to bidders or purchasers. That this deponent noted the prices for which the lots sold, in the margin of the catalogue, and deponent had no difficulty in so doing. That deponent attended said sale for the purpose of purchasing, but did not do so because he thought the prices for which the property sold were too high.

Subscribed and sworn to before me, this twenty-second day of February, 1856.

D. B. HEMPSTEAD,
Notary Public.

TESTIMONY OF S. C. HASTINGS.

STATE OF CALIFORNIA, County of San Francisco, ss:

S. C. Hastings, upon oath says: That he has attended the various State sales, and knows the manner said sales have been conducted, and that he was present at the sale of October 10th, 1855. That said sale appeared to be substantially conducted like all other State sales. That in all cases where the property was valuable, or the State's interest was of any considerable value, the auctioneer gave sufficient time to bidders, and struggled for the highest bids, and courted competition from all persons except delinquents; and whenever there was more than one claimant to property knocked down, the same was invariably resold. That there were many lots in which the State claims an interest after ninety-nine years from date of cession to San Francisco, and which lots are at present of no value

for immediate use, which were sold in considerable haste, and in numbers of one with the privilege; but deponent thinks they were sold for more than they could be sold for if now resold. That deponent purchased through Mr. Poland property of both classes, and paid for the same more than the State's interest is worth, and would now credit the State with $1000 if it would refund the amount of his purchases and re-sell the property.

Sworn to and subscribed before me, this twenty-second day of February, A. D. 1856.

D. B. Hempstead,
Notary Public.

TESTIMONY OF SAM. BELL.

County of Sacramento:

Sam. Bell, of the county aforesaid, being duly sworn, deposes and says: That he attended the sale of State's interest in water lot property held in the City of San Francisco, on the tenth day of October, A. D. 1855; that said sale was conducted by Selover, Sinton & Co., real estate auctioneers; that said sale was made with great fairness and deliberation, giving all who desired (except delinquent purchasers at former sales,) an equal opportunity to bid upon the property; that the bidding at said sale was very spirited, and in the opinion of deponent the property brought its full value, in regard to the State's interest; that in several instances the lot or lots, upon being knocked down and claimed by different parties, the same were put up again, in order to give satisfaction to all concerned.

Sworn and subscribed before me, this 27th day of February, A. D. 1856.

Wm. W. Price,
Notary Public.

AFFIDAVIT OF JOHN S. LOVE.

Sacramento City, March 1, 1856.

Messrs. Selover, Sinton & Co:

Gentlemen:

Your letter of twentieth of February has been received, and I proceed to reply to your interrogatories in the order in which they are put:

First. I was a member of the Board of State Land Commissioners appointed

under the water lot Act of 1852, to dispose of the State's interest in the water lot property in the City of San Francisco.

Second. I am familiar with the manner in which State sales were conducted by the first Board of Commissioners.

Third. Mr. J. T. McDougal purchased a large number of lots situated in the southern part of the city, known as South Beach.

Fourth. McDougal called upon me as one of the Commissioners, to make deeds for the lots purchased by him, but claiming a deed to embrace property outside of the boundary line as laid down by the law of 1852, under which the Commissioners were acting, I declined making such deed.

Fifth. The first that I knew of McDougal's claiming such property was by a communication addressed to me at Sacramento City by Mr. R. H. Sinton, of San Francisco, advising me of the fact that McDougal claimed a large tract of land other than he had purchased, and lying outside of the line as defined in the Act of 1852.

Sixth. Upon my return to San Francisco McDougal and Clark (Wm. H.) again called at the Commissioners' Office several times, and demanded deeds to the property claimed by them, which deeds were by me again refused, although I was always ready and willing to give deeds for such property as McDougal had bought, and in accordance with the large maps in the office, and by which said maps the property in question had been sold.

Seventh. The first Board, often where the property was not valuable, sold a corner lot, with the privilege of the block; this method so far from being prejudicial to the interest of the State, was clearly in my opinion the best that could have been adopted.

The pricipal cause of complaint I have heard against the old Board was that the prices obtained by the State were too high.

Sworn and subscribed to before me, this 1st day of March, 1856.

J. R. BEARD,
Clerk of Supreme Court.

By Dav. T. Bagley, Dept. Clerk.

TESTIMONY OF RICHARD M. JESSUP.

R. M. Jessup being duly sworn, deposes and says: That he was present at sale of State's interest in water lot property made by Selover, Sinton & Co., on the tenth day of October, 1855; that said sale during deponent's presence, was in his opinion conducted with fairness and necessary deliberation, affording an equal opportunity to all bidders; that said sale was conducted in a similar manner to prevous State sales attended by deponent; that in relation to the city slip property the price obtained was far above what the State's interest was worth, in opinion of deponent.

Sworn and subscribed before me, at San Francisco, this 26th of February, 1856.

H. A. Cobb,
Notary Public.

TESTIMONY OF JOHN R. CORYELL.

John R. Coryell, being duly sworn, upon oath deposes and says: That he attended and was a purchaser at the State sale of water lots, held at the auction room of Selover & Sinton, on the tenth day of October, 1855. That every lot bought by him was put singly and alone, and cried and knocked down to him, one at a time; and that he bought no lot excepting the last two without competing bids. That lots in block bounded by Washington, Jackson, Montgomery and Sansome Streets, were started by T. J. A. Chambers and Levi Parsons, at fifty dollars for the first lot sold, which said Coryell raised to one hundred and seventy-five dollars; and all bids on lots in said block were raised by him to prices ranging from one hundred to eight hundred dollars for each lot. That after he had overbid Mr. Parsons, who was attorney for the possessors of said block, and Mr. Chambers, who was also a possessor, and during the crying of said lots by the auctioneer, Mr. Parsons came before the auctioneer's stand, and addressing him, Coryell, said that he gave Mr. Coryell notice that they (meaning said possessors) would take steps to keep the said Coryell from getting title; the auctioneer suspended his crying while Mr. Parsons was so addressing him. And that the said Chambers also, during the sale of said lots, and after said Coryell had overbid him, came between the auctioneer and said Coryell, and remonstrated with said Coryell—said, "Mr. Coryell thinks he is buying a good thing." That upon these events, the auctioneer asked said Coryell from the stand, if he knew what he was buying, and was acquainted with certain litigations had upon the property; and was answered affirmatively, or impliedly so. That some time after the sale, the auctioneer informed said Coryell that said Parsons and Chambers had been to him before the sale, and asked him whether, in his opinion, said lots could not be bought by them, the possessors, on the day of sale, at fifty dollars each. And that of said Coryell's own knowledge, on the day of sale, said Parsons and Chambers did start said lots, at a bid of fifty dollars, and did remonstrate with said Coryell for bidding upon said property in said block. And said Coryell further says, that others, possessors of said block, by their attorneys, did bid against him for the lots contained therein; and that the possessors or others did bid against him on each lot bought by him, except the last two lots in said block, upon which the auctioneer could not obtain any advance upon said Coryell's first bid of two hundred dollars. That but one lot at a time was sold in said block; and that the auctioneer gave the fullest opportunity to all persons to bid upon the same, as well as upon all other lots bought by said Coryell; and that he, Coryell, heard no objection to the sale, excepting by persons who wanted to buy property possessed by themselves, but who would not bid the price offered by said Coryell and others, and excepting also bidders who were pronounced by the auctioneer to be delinquents to the State on former purchases made by them. Nor does said Coryell know of any irregularity in the conducting of the sale, excepting only the effort made by said Parsons and Chambers to discourage and deter persons from bidding upon property possessed by themselves, or by parties represented by them, which effort was fruitless, as the auctioneer gave unusual time to persons to bid on said property, and as the competition was greater on said property, between the bidders, and as the auctioneer stated that he sold the entire interest of the State in the same, which was known, or believed, to be Government Reserve.

And said Coryell further says, that he paid for each and every lot bought by him, in Controller's Warrants upon the State Treasurer; and that he received his deeds in the regular manner, and placed the same on record; and that he has

since sold and conveyed some of the said lots; and that in all things and toward all parties connected with the purchases and conveyances of said property bought by him at said State sale, he has acted in good faith; nor was there, in his opinion, upon the part of the auctioneer, in the management and conducting of said sale of October 10th, 1855, any thing differing from one other sale of said water lots, attended by said Coryell.

Sworn to and subscribed before me, this twenty-fifth day of February, 1856.

D. B. Hempstead,
Notary Public.

TESTIMONY OF S. C. HASTINGS.

S. C. Hastings, being sworn, deposes and says: While I was Attorney-General and Bigler was Governor, some years ago, I was informed by Mr. Bates (and which I found to be true) that there was pending in the courts a suit wherein the United States were plaintiffs, and Palmer, Cook & Co. were defendants, to cancel the lease of the Government Reserve and to control the rents. That Attorneys on part of the U. S. Government in Washington City had been engaged, one of whom was here. That Carothers was acting with the Attorneys, and in his capacity as Banker, was to receive and disburse funds that might arise from rents. The Attorneys in Washington City and in New York, believed the said leases to be a nullity, and that the United States were entitled immediately to the rents and profits. After an interview, the attorneys on the part of the United States came to the conclusion that they had made the wrong parties plaintiffs, and that the land in question truly belonged to the State of California, and hence, they, the Attorneys, had waited upon Gov. Bigler and stated their reasons touching the rights of the State, and spoke of an agreement for a compensation in the nature of a per centage in case of a final recovery. The Governor, doubting his authority to make the contract, made application to me for my opinion in the matter, and I gave my opinion, which is and was that he did possess this power. I did not possess the power myself. With regard to the amount of compensation to be allowed, I referred the Governor to the statute, allowing ten per cent. to any District Attorney for the recovery of money due the State.

I told the parties that I would execute the papers, and that they could take them for what they were worth—and go with them before the Legislature, and that that body would deal liberally with them. I never had any interest in the Carothers' judgment or contract.

The Attorneys, above alluded to, for the United States, at their first interview with me, stated that they had made the contract with the Governor, and that they thought it necessary for me to execute it in my name, as Attorney-General. That I then said to them, that I saw no statute to authorize me to execute such a contract. They contended that I had the power to do so, and that it would be legal. I then executed the contract, and gave it to them for what it was worth, they looking to the State to make what they could out of it.

At the time this contract was made, Palmer, Cook & Co. were in possession of

the Government Reserves, and claimed a title to them in fee as against the State, and all others. Mr. Carothers, at this time, was a Banker in this city, and had been selected as the financial agent by the Attorneys at Washington, concerned in this case, who was to be appointed Receiver of the rents of the property, when reduced to possession, and was to disburse all funds between the Attorneys interested, and to pay all costs. Mr. Carothers was used only as a business man between the parties.

I then believed, with the Governor, that it would be to the best interests of the State to make the contract, and I believe now it would have been if the contract had been complied with.

I was present at the last sale. There were two classes of property put up for sale; in one the State had the right of possession in four or five years, and the other a right after ninety-nine years. The last class was property remotely situated from business portions of the city, and comprising the principal part of the catalogue. The first class was in the heart of the city, and very valuable. As to the sale of the first class, I perhaps never saw an Auctioneer make greater efforts to procure high bids, with one or two exceptions, at this sale. As to the sale of the second class, the Auctioneer proceeded in great haste, exposing many lots, one with a privilege. I think the sale produced a greater sum than the property was really worth; it would not command the same price now. The sale occupied more than an hour's duration. I think I saw no more partiality exhibited in this sale, than is usually exhibited at Government sales, to widows, orphans, or helpless persons. I know of no persons being refused as bidders, except delinquents at previous sales. I heard Mr. Selover state the latter fact during the sale.

Those of the lots bid in by Mr. Poland, at the price in the aggregate of over $2,000, I had bought at former sales, paid for, and had my deeds, which were not recorded. One or two of the lots for which I held deeds, Dr. Coryell bought. On account of this re-sale of my property by the Commissioners, I used the expression that I had them in my power. I did not know at the time of this sale, that any judgment had been rendered on the Carothers' contract. When I said to Mr. Poland that I considered the Carothers' judgment a swindle, it was immediately after I learned it had been rendered, and that the owner of it had bidden off my lot at a very high price, three times what it was worth. I think the appraisement of my lots by Mr. Poland is incorrect, as he gives the value of the lots, and not the interest of the State after the expiration of ninety-nine years.

STATEMENT OF GOVERNOR BIGLER.

I never made or executed a contract with Jesse Carothers in relation to the recovery of the Government Reserve property. I never authorized Judge Hastings to make the contract to which his name appears. In several conversations had with Mr. Carothers and others, during the winter and spring of 1853, I expressed a willingness to present the question for the consideration of the Legislature, stating to them that I could make no contract without Legislative authority. Mr. Carothers, after contracting with Judge Hastings, requested me to approve the contract made by the Judge, which I *refused* to do; he also forwarded me a contract, in writing, binding the State to pay a *certain sum* of money, which I *refused* to sign.

When this case was before the Referee appointed by the Judge of the Superior Court of San Francisco, I received a letter from Attorney-General McConnell, requesting my testimony.

The day following the receipt of his letter I made an affidavit, a copy of which is herewith transmitted, (marked A.) and also a copy of Mr. McConnell's letter, (marked B.)

With the affidavit I transmitted to Mr. McConnell a copy of the unsigned contract in the handwriting of Mr. Carothers, to establish the fact that it had never been signed by me. A copy of the receipt given by Mr. McConnell for the unsigned contract is also herewith transmitted, (marked C.)

February 28, 1856.

[A.]

AFFIDAVIT OF GOVERNOR BIGLER.

John Bigler, Governor of the State of California, being duly sworn, deposes and says: That during the winter and spring of 1853, I had a number of conversations with Jesse Carothers, G. C. Bates and Mr. Platt, in relation to the recovery, for the State, of property in the City of San Francisco known as the Government Reserves. Messrs. Carothers, Bates and Platt, all concurred in the opinion that the property rightfully belonged to the State and not to the General Government. During these conversations, I freely expressed my willingness to do all in my power to induce the Legislature, then in session, to prosecute the claim of the State to the property in question, and to provide means for the payment of all the necessary expenses of liquidation—but never claimed that I had power to act, in the absence of legislation. Some weeks after the first meeting with Messrs. Carothers, Bates and Platt, I had a conversation with Attorney-General Hastings on the subject; I stated to him all the facts of the case. He agreed with me as to the claim of the State and concurred in the opinion, that I had no power to make any contract in relation to the matter, without the express consent or direction of the Legislature; but said that he believed there was a section of law relating to per centage payable to District Attorneys in suits brought by the State for the recovery of money or property under which he, as Attorney-General, would be authorized to make such a contract. At that time, I believe, nothing further was said on the subject. About ten days thereafter, I met Mr. Carothers, who informed me that Attorney-General Hastings and himself had executed a contract, which he desired me to approve, and, also, to execute another. A few days after, I received an agreement, in the handwriting of Mr. Carothers, obligating me, as Governor of the State, to pay him a sum of money to defray expenses, and accompanied by a letter requesting me to come to San Francisco and approve the contract executed by Attorney-General Hastings. I refused to sign the agreement sent me by Mr. Carothers, and, also, refused to approve the contract made by the Attorney-General, upon the ground, that in the absence of legislation on the subject, I had no power to act officially in the matter.

The agreement, executed by Attorney-General Hastings, to the best of my recollection, was never seen by me until after the meeting of the Legislature at Benicia, in 1854.

The precise language used in the several conversations which took place, I cannot now repeat, but do know that I never regarded myself as a party assenting to the contract, or as having done any act to bind the State in the premises.

After the organization of the State Board of Land Commissioners, I regarded them as having entire control over the Government Reserve property; and, although I advised the Board to obtain the Attorneys' opinions procured by Mr. Carothers, yet it being for them, and not for me, to fix upon the amount of compensation to be allowed Mr. Carothers, I never even made a suggestion to them in relation to the terms.

[B.]

"San. Francisco, Jan. 6, 1855.

Dear Sir:

All we want with your testimony in the Carothers' case, is to show whether you ever engaged, or authorized any one else to engage, Carothers to prosecute the suits, etc., for the State. It is only necessary for you to testify to this point. I have not seen the Referee yet and do not know whether he will consent to postpone it—at all events he will not put it off very long, since it has already taken up a good deal of time. The sooner we get your evidence the better for all parties, since it is desirable that a case of so much importance should be decided at the earliest possible opportunity.

I remain yours,
J. R. McCONNELL.

P. S. Did you get my Official Report? I sent it by Adams & Co.'s Express—but see no reference to it in your Report. There are some suggestions in it which I desire to be brought to the eye of the Legislature. If you did not receive it, I suppose it must have miscarried.

McCONNELL."

[C.]

"Received from Governor Bigler, an agreement between John Bigler, Governor, etc., and Jesse Carothers, date —— day of April, 1853, in the handwriting of Jesse Carothers, unsigned.

J. R. McCONNELL,
Attorney-General.

January 9, 1855."

TESTIMONY OF ARCHIBALD C. PEACHY.

Archibald C. Peachy, being duly sworn, deposes and says: Was present at the last Public Land Sale, but for a short time; went there for the purpose of bidding in the State's reversionary interest in some lots in the Folsom estate, for the benefit of the estate. It was stated by the auctioneer that the lots were to be bid in by the executors for the benefit of the estate. He also stated, at the request of the executors, to all persons who had purchased from Captain Folsom during his lifetime, that the title which the executors would get would enure to their benefit; the lots were accordingly put up for sale. Certain lots in the catalogue, between certain numbers, were put up together, the auctioneer stating that they were lots in the condition he had alluded to in reference to the Folsom estate, and Mr. Van Winkle, one of the executors, bid for them at the rate of fifty dollars a lot, and they were knocked down to him. Witness regards fifty dollars as the full value of the State's interest in that property. This sale was made after the decision of the Supreme Court in the case of The People of the State of California *v.* Joseph L. Folsom, adverse to the claim of the State of California, on the ground of escheat. Witness was not at the sale ten minutes; he left after the sale of the Folsom property; thinks some property was sold before that but does not remember what it was; took no interest in it.

STATEMENT OF GEORGE C. BATES.

George C. Bates, being duly sworn, deposes and says: That he resides in San Francisco, and is a Lawyer by profession. A suit was commenced by order of a special agent of the Interior Department at Washington, in December, 1852, on behalf of United States, against Palmer, Cook & Co., for the possession of property known as the Government Reserves. At this time, Mr. Benham, U. S. District Attorney, was absent, and the agent, being authorized to employ other counsel, was referred to me. The suit was to disencumber the Reserves of the leases held by Palmer, Cook & Co. The ground upon which the Government claimed the Reserves, was, that they had been set apart and dedicated to the Government by Mexican authority, previously to the treaty of Queretaro. The proceedings were instituted in the District Court of the United States, and testimony was taken in the cause; and from that evidence, it appeared that no reservations of the kind had ever been made by the Government of Mexico or California, as the Custom House, for which purpose the Reserve was in part made, had been upon the Plaza, and that the Government of the United States, therefore, had no claim whatsoever to the land covered by water, known as the Government Reserve, in the City of San Francisco. These facts were reported by me to Mr. Platt, U. S. Government Agent; and I advised him, that under the decision in the case of 3 Howard, U. S. Rep., Pollard's Lease *v.* Hagan, that I was satisfied the State of California owned the Reserve, subject to Palmer, Cook & Co.'s lease. Mr. Platt reported these facts to Mr. Carothers, who was an acquaintance and friend of Gov. Bigler, and through him they were communicated to the latter gentleman; and at the request of these gentlemen, I met, at

the Banking House of Mr. Carothers, in the early part of 1853, Mr. Platt, Gov. Bigler and Mr. Carothers. I then repeated to Gov. Bigler what I had reported to Mr. Platt, that, in my opinion, the title to the Reserves was not in the United States, but in the State of California, subject to Palmer, Cook & Co.'s lease; and I suggested to them that the proceedings pending in the District Court of the United States might be amended, so as to make the State of California a defendant in the action, and that the State might file a cross bill against Palmer, Cook & Co. and the United States, and then have the whole case go to the Supreme Court of the United States, where the right of the United States and State of California, and Palmer, Cook & Co., would all be settled by one decision. Gov. Bigler seemed very much interested in all the facts that had been stated, and in a short time afterwards I received a written request from Mr. Platt, to state in writing what I previously had stated, which he said, I believe, he wished to lay before the Governor. I did make a full statement of all the facts and the authorities bearing on them, which document was furnished to the Governor. Within a short time after this, I was again requested to meet these parties at Carothers' Banking House. Mr. Carothers then stated to me that he was about to make an arrangement with the State, to act as its agent, to obtain all the necessary papers from the archives at Washington, and to obtain the written opinions of some eminent lawyers, either in New York or Washington, as to the rights of the State upon the facts which had been presented to them. There were some three or four interviews in regard to the matter, when it was determined by the Governor, that Mr. Carothers should act as the agent of the State; that he should immediately send to Washington for all necessary papers, that he should obtain the opinions of lawyers to be agreed upon, and that he (C.) should pay all the expenses, and to incur all the risks, in obtaining a judicial decision upon the rights of the State to the property. It was finally determined that such a contract should be drawn, and one was drawn by Mr. Platt, for the Governor to sign with Mr. Carothers, embracing the above provisions. At a subsequent evening the parties were at the same place to have the contract signed, and then Governor Bigler stated that he had had a conversation with the Attorney-General, who had advised him that he, the Governor, had no authority to sign such a contract as would bind the State; but that he, the Attorney-General, thought that he had the authority to employ an agent to assist in prosecuting the State's right, and that by virtue of the Revenue Act of 1852, he might allow ten per cent. commission on moneys collected for the benefit of the State, or for property found belonging to the State. The result was, that the original contract was changed, and was made a contract between the Attorney-General and Mr. Carothers. Immediately after this matter was closed, the bill, in District Court of the United States, was amended, the State of California was made a defendant, the papers were served on the Attorney-General and Governor Bigler. The State filed an answer to the bill, and also filed a cross bill against Palmer, Cook & Co. and the United States, to which an answer was filed by the United States alone, and the case was then ready for a full hearing and a final decision of the rights of all parties in the Courts of the United States; and by which decision the rights of all parties would have been finally adjudicated upon, when, on the 3d of March, 1853, an order was issued by the Hon. A. A. H. Stewart, Secretary of Interior, directing the District Attorney, or the counsel for the Government, to suspend all proceedings in the case.

About this time, I furnished to Gov. Bigler a copy of my brief in the case, and soon afterwards he sent a message to the Legislature, and in addition, I went with him and purchased the authorities referred to in the brief. After the reception of this message, the Legislature passed an Act establishing a Board of State Land Commissioners.

The evidence being all, or nearly all, documentary, was furnished to Mr. Lull, who had repeated sittings in the cause, at all of which the then Attorney-General was present, either in person or by his deputy; and after many months' delay, and a written argument by the Attorney-General and this deponent, on the 30th of May, 1854, the Report of the Referee was taken and filed. From the time of the assignment by Carothers to Dr. Coryell, all the instructions to deponent were given by the Doctor, but Mr. Carothers having failed and deponent being his Attorney, he was constantly in his office. When the Report was filed, as Mr. Carothers owed large debts which he was trying to arrange, and as the judgment was in his favor, he desired that it should not go into the newspapers, lest it might be attached and he put to trouble. In the management of the cause from beginning to end, it was conducted openly and fairly; and the Attorney-General, or his deputy, always attended on behalf of the State. And deponent believes, that under the decisions of the Supreme Court of the United States, that the contract made was binding in equity, and that the Report of the Referee would be sustained under their repeated decisions.

And this deponent saith, that since the 31st of May, he has had no connection whatsoever with said judgment or its owner, until about the 1st of December, 1855; that from the 16th day of June down to the 29th October last, he was out of the State; that as to the State sale, he knows nothing except by hearsay; that he has no interest, direct or indirect, in any lands bought, or benefits received by any person at that sale; that he never counseled, advised, or was in any manner privy thereto. And this deponent further saith, that for all the services rendered to said Carothers, or said Coryell, or in the private matters of said Carothers, he has never received one solitary cent; that when Carothers left the State, he owed this deponent and partners three hundred and nineteen dollars, for costs advanced in his business, to Clerks and Sheriffs, and that, by reason of said judgment, or the Carothers' claim, he has never received, either from the State of California, nor any person whatsoever, one single dime, (save the $3,000 State scrip); that he is not, directly or indirectly, by implication or otherwise, interested in any lands purchased at State sale, (except that two lots of his own were sold for about forty dollars each, and the parties purchasing demanded five hundred dollars for a quitclaim); and that Mr. Carothers now owes to deponent for his entire services in these whole matters, unless he shall realize from said judgment.

And the deponent saith, that after the said judgment was rendered in May, and about the 16th of June, 1855, before leaving the State, he had an interview with Mr. Carothers, and required him to settle for his services, and that, after repeated interviews, Mr. Carothers arranged with deponent to give him a bond to pay deponent $7,500 out of the judgment, whenever it should be allowed by the State on debts due to it from the sale of lands or otherwise; that in the month of November, and after the said sale, the said Carothers and Coryell called on deponent, and after much urgency and requests on their part, he gave up said bond and took an assignment, now on file, of a part of said judgment; and that, save this said assignment, he, this deponent, has never, in any form or shape, received the least benefit, pecuniary or otherwise, for all the services rendered by him to said Carothers, during two or three years, and for all services rendered in the matters of the State.

Sworn and subscribed this 25th day of February, 1856.

James W. Coffroth,
Of the Committee.

EXHIBIT A.

SAN FRANCISCO, April 24, 1856.

To the Treasurer of the State of California:

SIR:

The following lots having been purchased by my agents, and for my use, at the two last Commissioners' Sales, and the ten per cent. paid at the time, I now propose paying the balance, or remaining installments, which are due and to become due, and herewith hand you my account against the State, for services and money expended, on behalf of the State in the investigation of the Government Reservation, as per direction of the Governor and Attorney-General, and request that you will apply so much of it as may be necessary to pay those remaining installments, viz:

Lot No. 44	$1,125 00	
" 45	1,050 00	
" 46	900 00	
" 33	1,550 00	
" 34	1,550 00	
" 35	1,700 00	
" 15	3,400 00	
" 16	5,500 00	
" 17	3,900 00	
" 18	2,750 00	
" 8	1,500 00	
	$25,025 00	
Less 10 per cent. paid	2,502 50	
		$22,522 50
Lot No. 22	$4,000 00	
" 23	2,500 00	
	$6,500 00	
On which has been paid	1,000 00	
		5,500 00
Total		$28,022 50

[For Exhibit B, reference is made to the original (B) appended to the affidavit presented to the Honorable Committee of the Senate.]

(Signed,) J. CAROTHERS.

EXHIBIT B.

BILL OF COMPLAINT.

Superior Court, San Francisco County, ss.

JESSE CAROTHERS, Complainant,
v.
LEVI HERMANCE, JOHN S. LOVE, JOSEPH HOPKINS, et al.
State Land Commissioners, Defendants.

The complaint of Jesse Carothers against the above named defendants, respectfully states and shows unto this court, that heretofore, to wit: On the twenty-eighth day of December, A. D. one thousand eight hundred and fifty-three, the said defendants, as Commissioners of the State of California, pursuant to the provisions of the Act of the Legislature of the State of California, approved the eighteenth day of May, A. D. one thousand eight hundred and fifty-three, sold all the right, title and interest of the State of California in and to the following hereinafter described pieces or parcels of land lying and being within the limits of the City of San Francisco, and which said lots are all described in a map of the said premises hereto appended and made part and parcel of this the complainant's bill of complaint, and that on said sale so made of the interest of the State in said lands, there was duly paid to the State of California ten per cent. of the purchase money of the said lots, leaving the remaining portion of the said purchase money, ninety per cent. due and unpaid, a lien thereon.

And the complainant further states and shows unto the court, that on said sale, and after the payment of the first installment of purchase money on said lots, the said defendants executed and delivered to the several purchasers thereof, bonds or instruments of conveyance, conditioned that on the payments of the remaining installments due to the said State of California, the purchasers of said lots or their assigns, would be entitled to and would receive from the said defendants, deeds of conveyance of all the right, title and interest of the said State in and to said lots.

And your complainant further states that he has become and now is the *bona fide* owner and purchaser of the said several lots so sold by the said defendants, and that he now holds and is ready to produce and prove, as this Honorable Court shall direct, the said bonds or instruments of conveyance made by the said defendants, of the said several lots which have been duly assigned and transferred to him, this complainant, and that he is the lawful and equitable owner of the said several lots which are known and described as follows, viz:

Lot No. 44, in Block between Jackson, Washington, Front and Davis streets.
Lot No. 45, in Block bounded by same.
" 46, " "
" 33, " "
" 34, " "
" 35, " "
" 15, " "
" 16, " "
" 17, " "
" 18, " "
" 8, " "

Lot No. 22, in Block bounded between Jackson and Washington, on Drumm Street.

Lot No. 23, bounded by same.

Lot No. 1, in Block between Jackson and Washington, and Drumm and Front Streets.

Lot No. 39, in Block between Davis and Front, and Jackson and Washington Streets.

Lot No. 38, in same Block.

And the complainant further states, that there remains unpaid of the purchase money of the said several lots, and as an equitable lien or mortgage thereon, the aggregate sum of thirty-two thousand eight hundred and seventy-two dollars and fifty cents, as by reference to the said several bonds or certificates of sale will more fully appear.

And the complainant further states, that the said defendants are about to proceed to enforce the payment of the said equitable mortgage on the said premises for the remaining portion of the purchase money due thereon, by a re-sale of the said premises, or by some other means, and to compel the payment thereof.

And your complainant further states unto the court, that he, as Agent of the State of California, was duly employed and authorized by the authorities thereof in the year one thousand eight hundred and fifty-three, and rendered, by direction of the Executive of the State, services, time and labor, and expending large sums of money at the request of the officers of the State of California, and for the use and benefit of the said State of California, in obtaining evidence of the opinions of eminent lawyers out of the State, upon the legal rights of the State to the Water Property, embracing the above described property. That said work and labor, and expenditure of money by the complainant at the special instance and request of the said officers of the State of California, enabled them to realize a large amount of money, and that the defendants availed themselves, at and before the sale of the said premises, of such work and labor of the complainant, and the expenditure of his money, at the request and by order of the State of California, to enhance the value of the property so sold by them, including the above entitled lots, and that the State of California has actually received from the labor, services and moneys so expended by the complainant for the State, at the request of her officers, several hundreds of thousands of dollars, as he believes, from the enhanced value of said premises, and the value of these identical lots, now owned by your orator, were greatly enhanced at said sale thereby.

And this complainant further states and shows unto the court, that there is now due to him for such services, work and labor rendered by him to the said State, at the request of the lawful authorities thereof, and for money paid, laid out and expended by him for the use and benefit of the State, in obtaining evidence and legal opinions as to the titles of said land, justly and equitably, the sum of fifty thousand six hundred and thirty-four dollars and ninety-two cents, as he is ready to verify and prove, as this court shall direct, and that the said work and labor and money paid by him, actually greatly enhanced the value of the above property, and the identical property above described.

And your orator further states and shows unto the court, that the said sum of money so due from the said State of California to your orator, is in equity and in law a set-off to the balance of the purchase money, so due on the said several lots so owned by your orator, this complainant; and is an equitable payment of the said balance of the purchase money so due on said lots which in equity constitutes an equitable lien and mortgage thereon, the payment of which said balance the said defendants are about to enforce by a sale of said lots, or in some other manner prescribed by law, without first canceling said sale, and refund-

ing the purchase money so paid. And this complainant further states, that he has presented his said account for such work and labor, and services, to the Treasurer of the State, as a payment or set-off to the balance so due, as the purchase money of said lots, and has requested him to allow the same as a payment of such balance, which he has refused.

And the said complainant further states, that he has also presented the said account due to him to the said defendants, Commissioners, as evidence of the payment of the balance due on said several lots, and has demanded from them conveyances to him of the said several lots above described, which reasonable and equitable request, these said defendants have also refused.

And this complainant avers, that in equity and good conscience, the said balance, so due as purchase money of said lots, has been paid, and that the said sum of money so due to your orator, is a just and equitable set-off to the balance and lien on the lots aforesaid for the purchase money thereof, and that in law he is entitled to a conveyance and deeds thereof from the said defendants, the same having been, in fact, duly and equitably paid, as aforesaid.

Wherefore, the complainant prays that bythe decree and order of this Honorable Court, the said account for work and labor for the State, and for money expended by him at the special request and instance of the State of California for its benefit, may, when proved, be declared to be a set-off to the balance so due as the purchase money of said lots, and that the said defendants may, by a decree of this Honorable Court, be ordered to execute and deliver to this complainant good and sufficient deeds in law of the said several lots above described ; and that the said defendants may, in the meantime, be enjoined from foreclosing, or in any manner whatsoever enforcing the said lien on the said lands for the purchase money thereof, and that this complainant may have such other and further relief in the premises as is consistent with equity and good conscience, and this complainant will ever pray, etc.

E. A. LAWRENCE,
Solicitor for Complainant.

State of California, County of San Francisco, ss :

Jesse Carothers being duly sworn deposes and says, that he has read the foregoing bill of complaint, that he is the complainant therein, and that the same is true of his own knowledge and belief, except as to such matters which are therein stated on his information and belief, and as to these matters he believes it to be true.

JESSE CAROTHERS.

Subscribed and sworn to before me this 27th day of April, 1854.

Jas. B. Morrison.

THOMAS HAYES, Clerk.
By Otmar Caler, Deputy.

AFFIDAVIT OF WM. M. STEWART.

In the Superior Court of the City of San Francisco:

In the matter of the matter of the intervention of Jesse Carothers, in the case of the People *v.* Talmadge, I would most respectfully submit the following statement unto this Honorable Court:

About the first of June, 1854, I was appointed acting Attorney-General, and located myself temporarily in the City of San Francisco. A short time thereafter Jesse Carothers called on me with a contract made by Ex-Attorney-General Hastings on the part of the State, and himself, wherein he undertook to perform certain services for the State in the capacity of an agent, and for which he was to receive ten per cent. of all property recovered by him for the State, together with receipts of moneys purporting to have been disbursed in pursuance of said contract. I told him that I didn't know anything that I could do for him, that he must go to the Legislature if he wanted relief; sometime during the summer Carothers failed in business. He came again to me and represented that one cause of his failure was the moneys he had advanced for the State. He said Governor Bigler knew all about it, and I told him that I would mention the matter to the Governor; and when I saw the Governor again I told him that I thought Carothers had a just claim for something, but I did not know for what amount, and the Governor seemed to concur in my views. At this time I had only heard Carothers' statement of the affair, and he represented that the Board of California Land Commissioners had availed themselves of legal opinions and other documents procured by him. About this time I met Ex-Attorney-General Hastings, and he told me that he wished I would sue Carothers, as he (Carothers,) was indebted to the State, and the State owed Carothers, and he wanted to make a set-off. I told him that I had been in San Francisco but a short time, and that I was not fully informed as to the State sales and the matters connected with the Board of Land Commissioners, and that I only commenced such suits as they ordered. I continued to attend to the business of the Board from June until the return of Mr. McConnell, the then Attorney-General, about November, 1854. During this time, by the direction of Dr. Hermance, the President of the Board, I employed some assistance in several of the important cases, but for which the Board nor the State has ever paid one cent. After the return of Mr. McConnell, the Board brought me several cases on which to bring suit for certain deficiences between the original sales and re-sales for want of payment. Among these was the Talmadge case. I prepared complaints in all the cases, some for one count and some for another, in order to get the opinions of the different judges upon nearly the same questions. Not long after this a bill of intervention was served upon the counsel for the State, which set up the fact that Jesse Carothers was the purchaser of a portion of the lots set out in the complaint against Talmadge. And also setting up his caim against the State before-mentioned. In a few days after this I was in the Superior Court room one morning, and Mr. Bates I think called up the case and suggested a reference. I stated that such a course would suit the convenience of the counsel for the State, inasmuch as we had just experienced almost insurmountable difficulties in the case of The People *v.* White, before the Fourth District Court in procuring at any one time sufficient evidence to establish a compliance on the part of the State with all the requirements of the Act under which the Board was organized. The Court then made the reference of the matter to Louis R. Lull, a gentleman then unknown to me. And to this both Bates

and myself agreed. He notified us of the time and place he would hear the case, and both parties appeared before him. In support of the intervention several witnesses were called, to show that Carothers was the real purchaser of the lots claimed by him, and that Talmadge was only acting as his agent in the matter. And then they offered to prove a contract between Carothers and the State, made by Ex-Attorney-General Hastings, under the direction of Governor Bigler. I objected to the introduction of any evidence, on the ground that none of the State officers had any power or authority to make such a contract. It was afterwards agreed that all the evidence might go before the Referee under an exception. After the evidence was all submitted, I presented my points in writing, which are now on file in this court, and to which I would call particular attention, as the views that I then entertained are therein stated.

The Referee then took the matter under advisement, and did not report for several months. I inquired several times the cause of the delay, and finally it was suggested that the time in which the Referee was allowed by law to report had expired. I told them that I was willing to sign a stipulation, waiving all errors on account of such delay, and allow the Referee to report; that much time had been occupied in obtaining the evidence, and it was but justice to all parties that the report should become a matter of record, so that if the parties wished to apply to the Legislature for relief, they would have all the evidence prepared. Soon after this conversation, a stipulation, drawn up by Mr. Bates, was presented to me to be signed by Dr. Coryell; supposing it was only a stipulation, allowing the report to be filed, waiving mere matters of form, occasioned by the delay, I signed it, not observing the last part of it, which allows judgment to be entered.

The following is a copy of the stipulation:

"SUPERIOR COURT OF SAN FRANCISCO.

JESSE CAROTHERS, Impleaded, Etc., }
v. }
THE STATE OF CALIFORNIA, Inf. }

San Francisco County, ss:

It is hereby stipulated and agreed, that the Referee may file his Report in this case, and that all objections as to the time of making said Report, and all objections of form, shall be, and the same are hereby waived, and that judgment may be entered thereon.

GEORGE C. BATES,
Attorney for Interpleader.

WM. M. STEWART,
Of Counsel for Plaintiff.

May 30, 1855."

I doubt very seriously whether the foregoing stipulation authorizes a judgment to be rendered without the consent of the court. It does not appear to me as an uncommon or unnatural use of language to say, that the stipulation waives objection, as to time and form, and authorizes the Referee to report in order that court may pass judgment thereon, as it might have done had the report been made within the time fixed by law.

I do not pretend to say that the parties presenting the stipulation intended any

advantage in the matter or in any way to mislead me, for the stipulation is drawn in pursuance of the order of the court appointing Mr. Lull Referee, to report the facts and a judgment, yet if I had observed the clause in question I most certainly should not have signed the stipulation.

Here the matter ended with me. I supposed that the Referee had reported all the facts and his opinion in favor of a judgment, and whenever the parties wanted a judgment they would move to confirm the report. But I regret that on an examination of the report, which I never saw before to-day, to find that the Referee has not reported but a small portion of the evidence and his own conclusions form the balance. A portion of the documentary evidence was left at Mr. Bates' office, to which, together with the points of the respective counsel, which I have this day procured and placed on file in the Clerk's office of this Court. If I had been fully informed as to the precise condition of this case I should not have supposed that the State would be in any way improved thereby, for I regarded my judgment against the State as simply a nullity, unless the Legislature should see fit to make an appropriation for that purpose; and they might do the same if it was only a claim supported by any evidence that would satisfy them of its equity. Notwithstanding, if I had not acted under the mistake above-mentioned, I should have appealed the case to the Supreme Court. The reason why Mr. McConnell dismissed the action as to Talmadge, as I understood, was, that the old Board had been abolished, and before they went out of office they notified us that they would not aid further in the prosecution of the State suits and that we better wait until the new Board was organized. We could not obtain testimony without the co-operation of the Board, and it became necessary to dismiss to prevent a default against the State, or at least the Attorney-General so regarded it; and besides, there were several other cases pending which would test the questions in the Talmadge case. After the signing of the stipulation above referred to, I spent much of my time out of the City of San Francisco, in Alameda County and at Nevada, until about the last of August, when I attended to two or three State cases at the request of Mr. Cohen, the Agent of the Board, but paid no further attention to the Carothers' matter.

In September last I went to Nevada, where I have since resided. I know nothing whatever of the transactions in reference to the Carothers' judgment, subsequent to the signing the stipulation above-mentioned. I served the Board as faithfully as I could for about a year and a half, whenever I was called on, which was quite frequently, and for which I have never received one dollar. The Board denied their authority to pay me, because they said there was no especial appropriation for that purpose, although they had paid two other Attorneys before me. I did not press the matter upon them, because I did not wish them to construe the law liberally on my account.

I would further state, that I did not hear of the payment of this claim by the Land Commissioners until I saw a statement of it in the newspapers. I should have come down immediately, if it had not been for sickness in my family, which detained me.

Hoping that the foregoing statement may be filed as a paper in the case, I remain with high respect,

WM. M. STEWART.

San Francisco, February 28th, 1856.

Subscribed and sworn to before me, February 29th, 1856.

WM. R. SATTERLEE.

IN SENATE.] [SESSION OF 1856.

REPORT

OF THE

JOINT HOSPITAL COMMITTEE.

JAMES ALLEN, STATE PRINTER.

REPORT.

Mr. President:

The undersigned, Joint Hospital Committee of Senate and Assembly, to whom was assigned the duty of visiting and examining the condition of the State Insane Asylum at Stockton, would respectfully beg leave to submit the following Report:

In accordance with the mandate of the joint resolution of your honorable bodies, we visited Stockton, and immediately entered upon the discharge of our duties.

The hospital building is delightfully situated, about one and a half miles from the business portion of the city, upon lands deeded for that purpose to the State by C. M. Webber, Esq., the pioneer of the San Joaquin. The lands embrace an area of about one hundred and ten acres, and are well located and adapted to the purposes of the Institution. The main tract is one hundred acres in extent, inclosed by a neat paling fence and beautifully studded with natural forest trees, presenting a pleasing prospect to the eye, constituting likewise a secluded spot where diseased minds, retired from the vexatious and troublesome scenes of active life can find refreshment and repose.

The main structure is a noble building, an honor to our young and growing State, situated on the northern boundaries of the city, and overlooking the beautiful valley of the San Joaquin. Its position affords to the inmates a delightful and fascinating view of scenery, admirably calculated to tranquilize their troubled spirits and cool their fevered imaginations.

The main building is a brick structure, seventy feet square, three stories high; the first story is fifteen feet in the clear, containing eight rooms, and two halls fourteen feet wide; the second story is twelve feet in the clear, containing sixteen rooms, with halls same as in the first story; the third story is eleven feet in the clear, containing eighteen rooms with halls same as in the lower stories.

There is a ventilator in every room, flues in all the rooms in the first story and in all the principal rooms in the second and third stories. The hight of the spire from the ground, is one hundred and nine feet, and the hight of the top of pediment from the ground, is sixty-one feet. The upper stories are made use of for patients; the lower story for office of Resident Physician, reception rooms, reading rooms, apothecary rooms, cabinet, etc.

This building was created by virtue of an Act of the Legislature of 1853, which Act appropriated the sum of eighty thousand dollars for that purpose. In consequence of the alarming increase of insanity among us, it was soon found to fall

far short of the requirements of the State. In accordance with the liberal spirit which the Legislature has ever manifested toward this Institution, the subsequent year an additional appropriation was granted for the erection of a wing, which was built in the summer of 1854. The wing your Committee found to be a substantial brick structure, one hundred and thirty feet in length, fifty feet in width, and is occupied mostly by male patients. An appropriation was also made by the last Legislature for the erection of a brick kitchen, bath and wash rooms, which was found to be built in a neat and substantial manner, and admirably adapted to the purposes for which they were designed.

Your Committee are much impressed with the necessity which exists for the erection of an additional wing for the accommodation of female patients, the numbers of which are rapidly increasing, as also the absolute requirements of more room, in order that patients can be more properly classified. The number of insane is comparatively few who are visited with entire and absolute aberration of mind, and those who are thus afflicted should surely be nursed separate and apart from a different class of patients, in order that a line of discipline may be adopted which the character of the mental afflictions require, and that those who are temporarily or partially deranged may not be revolted or frightened by the occasionally seeming rough and vigorous enforcements of it in their presence.

Reason would teach us that there must be found among the inmates of every insane asylum, many of both sexes—the rich and the poor; the learned and the illiterate; the refined and the vulgar; the good and the vicious; each of which classes should be instructed, reproved and restrained by methods suitable to their various conditions, temperaments, habits and associations. Your Committee need not say that this to a certain extent is impossible, when the patients are thrown into one indiscriminate mass without regard to the degrees of insanity, the difference of tastes, habits and education. All such attempts to amalgamate in older Institutions have failed, and tended much to impair the utility of those Institutions in the promotion of health and happiness to a large class of suffering humanity. Your Committee, therefore, would strongly second the request of the Trustees for an appropriation this session, of a sum in warrants equal in cash to forty thousand dollars, for the erection of an additional wing to correspond in size and architectural style with the one at present occupied. For the purpose of giving your honorable body a better idea of the wants of the Institution and its appearance after the wing shall have been added, your Committee have caused to be prepared a wood cut which is respectfully submitted with this report.

In regard to the grounds and out-buildings connected with the Institution, your Committee would say that everything appeared in the most perfect order; neatness, convenience and durability seemed to have been the great object aimed at in their construction. The grounds in front and adjacent to the buildings are tastefully laid out with brick walks, and ornamented with flowers and shrubbery, calculated to strike the mind of every visitor with sensations of pleasure, and tending to cluster around the home of earth's unfortunates visions of happiness and peace.

On an examination of the wards, your Committee found everything in admirable order. In this department, as well as on the outside, great care seemed to have been taken to promote health, cleanliness and ventilation. Your Committee found in the wards one hundred and seventy patients, presenting a mass of humanity suffering with insanity in all its varied forms. The monomaniac, imbecile, idiotic and the raving madman, in close proximity, listening to each other's incoherent expressions, and replying in the same strain. In the female wards were found the mild and gentle maiden, grieving over the imagined desertion of her heartless lover, and the young mother pining over the fancied death of a beloved child. In the same ward were heard the foul imprecations of the brazen-faced prostitute and the senseless chatterings of the aged vixen.

In the male wards the same degree of cleanliness and regularity were manifest, but owing to similar causes the same want of classification was found. In all other respects, everything seemed to be well arranged and does much credit to those who have had the Institution in charge. One difficulty, which appeared to your Committee strikingly manifest in the Institution, and which should not be overlooked, was the entire absence of any proper means by which the building can be properly warmed. Stoves have been in use to a limited extent, but your Committee are satisfied that they are not only inconvenient and expensive, but absolutely dangerous. In a climate like ours, artificial heat is not of course as much in demand as in many of the Atlantic States, but every one who has resided on this coast for a period of years, is well aware that seasons do occur in which the use of artificial heat would be absolutely necessary for three or four months in the year. Your Committee would, therefore, recommend that the Trustees be empowered to erect or provide apparatus for the warming of the entire building in accordance with the plans now in use in the best asylums in the Atlantic States.

Your Committee are also of the opinion that a small portion of the land belonging to the Institution could be used for cultivation, not only as a source of some profit in the raising of vegetables, large quantities of which are used by the inmates of the Institution, but would also be a source of physical benefit to the patients. The experiment of slight labor has been proved to be beneficial to some classes of patients in the Atlantic States, and your Committee are satisfied, that on many in this asylum, the effects of labor would be salutary, unless they were overworked, an event highly improbable. By it, physical health could often be promoted, mental quietude increased, and the physical man invigorated and refreshed.

In regard to the financial affairs of the asylum, your Committee would say that they have given them a thorough examination. They found vouchers for the expenditures under the different appropriations, and, with a few slight exceptions, everything appeared correct. The appropriations for subsistence for the past year failed in November, consequently, there is a deficiency for two months, amounting to near four thousand dollars. Your Committee believe that a change in the commencement of the fiscal year is highly necessary, not only in point of convenience, and on account of the fiscal year of the State commencing in July instead of January, as with the asylum, but also as a measure of economy, supplies being obtainable on much more favorable terms if paid for at the time than running the risk of delays, as the Trustees are frequently obliged to, in consequence of the appropriations falling short and the neglect of the Legislature to supply the requisite funds at an early day in the session.

The importance of bringing the transactions of the State upon a cash basis, is manifest in the affairs of this Institution, as well as all others where the State is concerned. Could the appropriations of the past season have been in cash instead of warrants, there would have been a saving to the State of at least fifteen thousand dollars. A change, then, to the cash system, at the earliest practicable period, is a result much to be desired.

In conclusion, then, your Committee would say that the Institution is in a prosperous condition, and certainly reflects great credit on those who have had it in charge. It is one which is an honor to our State, and one of which every true Californian may well be proud.

To the citizens of Stockton, the Trustees of the asylum, the Resident Physician, Dr. Reid, and his amiable and accomplished lady, Mrs. Reid, the Matron, as well as the Assistant Physician, Dr. Cowan, your Committee are under the deepest obligations for the facilities offered them in the discharge of their duties. The friendly and cordial welcome which was extended to them personally by all with whom they were associated, contributed not only greatly to the pleasure of

their visit, but it is a striking evidence to them that the officers of State were not misguided in locating one of the principal public charities among citizens so strongly characterized by their advancement in refinement, intelligence and philanthropy.

HENRY M. FISKE,
Chairman of Senate Committee.

THOS. J. OXLEY,
Chairman of Assembly Committee.

SACRAMENTO, March 29th, 1856.

Document No. 10.

IN SENATE.] [SESSION OF 1856.

REPORT

OF

SPECIAL COMMITTEE

APPOINTED TO

ASCERTAIN THE AMOUNT OF CONTROLLERS' WARRANTS ISSUED DURING THE YEAR 1855, ON AC'T OF STATE PRISON.

JAMES ALLEN, STATE PRINTER.

REPORT.

MR. PRESIDENT:

The Special Committee appointed to ascertain the amount of Controller's Warrants that have been issued during the year 1855, on account of the State Prison, and to ascertain the amount paid thereon, and to report on the legality of the issuance of all warrants connected with the State Prison for the year 1855, have had the same under consideration, and ask leave to submit the following

REPORT.

The Committee did not deem it necessary to inquire what amount of warrants had been issued prior to July, 1855. From the 2d of July, 1855, to the 24th day of January, 1856, inclusive, a period of six months and twenty-three days, the sum of $268,460 77, was issued, in State Controller's Warrants, as appears from an "Abstract of Warrants issued on account of the State Prison," and furnished to the Committee at their request, by the State Treasurer. The above amount was issued for the following purposes, viz:

Building Prison Wall	$125,157 84
For Supplies for Prison	47,748 72
For purchase of State Prison Property	47,477 70
Paid for transporting prisoners, paid subordinates, etc., etc	48,076 51
	$268,460 77

Of the above amount, $62,436 26 have been paid. The amount remaining unpaid, is $206,024 51.

The $125,157 84, issued in State Controller's Warrants, for the construction of the Prison wall, was issued from time to time, on orders drawn by John S. Love, one of the State Prison Directors, upon Hon. Samuel Bell, then Controller of State. In these orders for the payment of Mr. Smiley, for building the wall, and which are the only vouchers the Controller issued the warrants upon we find that Mr. Love has drawn in favor of Smiley to the amount of $10,790 57, for supplies furnished the Prison. Your Committee are of the opinion that by the word "supplies" is meant provisions, especially as we find another order from

Mr. Love upon the Controller in favor of Smiley, for building the wall, for the sum of $5,044, wherein he specified provisions, lumber, iron, etc." The contract with Mr. Smiley was for building a wall and furnishing, in part, the materials therefor; and we are at a loss to know why he should furnish provisions, and how he could be paid for them under a contract that was made for bricks and stones. [For particulars, see vouchers accompanying it, all of which are annexed to this report.]

The Committee examined Mr. Samuel Bell, late Controller, under oath, who says he considered himself authorized, by "An Act to Provide for the Government of the State Prison," approved May 7th, 1855, to issue all of the warrants, ($125,15784,) that were issued on account of the State Prison. By referring to the above law, we find the following in section 2d: "A majority of the Board shall constitute a quorum for the transaction of business." There is no part of the law which gives one Director the power to transact business for the whole Board; still we find that Mr. Love has, in connection with this one subject, acted for the whole Board, and drawn upon the Controller, with wonderful success, for the sum of $125,157 84. It is due to Mr. Bell, however, to state, that he said to the Committee, that the other Directors would have signed the orders if he had refused to issue the warrants on the name of Love. But there is no law which authorizes the Directors to draw upon the Controller for warrants for the building of the Prison wall, nor to authorize the Controller to issue such warrants. The only law which can be so construed, and we think such a construction violent, is section 18th of the Act referred to, which reads as follows: "The salaries of all the officers and employees may be paid monthly out of any funds in the Treasury of the Prison, by an order from the Board of Directors; and any deficiency not provided for by funds in the Treasury of the Prison, shall be audited and settled quarterly by the Controller of State, on the presentation of the proper vouchers by the Board of Directors, for which he is authorized to draw warrants on the Treasurer of State, to be paid out of the General Fund." By reading the above section separately, or in connection with the entire law, there can be no doubt but that the word "employees" means simply those persons who were hired or employed by the Directors, as officers, guards, servants, etc.; and it is but fair to say, that in section 18th, the term "Board of Directors," means just what section 2d says it does, "A majority of the Board." If we do not put this construction on the above law, we must conclude that the Directors had power not only to have employees, but also that each one of them, in his capacity of Director, had power to draw upon the Controller, in favor of his employees, for any amount which his judgment, or his conscience, might dictate. Without such a construction of the law, each Director could as easily draw for a million as a hundred dollars, and the Controller might with equal propriety issue his warrants. Does any sane man think the Legislature of 1855 intended to give such unlimited power to these officers? The Act which, it is pretended, gives a power so monstrous to those officers, does not purport to alter, amend, or repeal, any other Act; and we find in the statutes of 1854, a law limiting the power of the Controller, which is still in full force, and a portion of which reads as follows: "He, the Controller, shall audit all claims against the State, which by law are specifically authorized to be audited and paid out of the Treasury, excepting only such claims as may be expressly required by law to be examined and adjusted by other officers, or persons; and no claims for services rendered the State, or any officer thereof, or for advances made to, or on, account of the State, or any officer thereof, shall be audited or allowed, unless such service or advances be especially authorized, and the compensation fixed by law."

No compensation was fixed by law for building the Prison wall. The only inference is, that the Legislature by "An Act to provide for the government of the

State Prison," referred to in another place, intended that the wall should be built, and the materials furnished, mainly by the State Prison convict laborers, and that a few persons necessary to be employed to superintend the work, should apply, as has been usual in cases of debt, to the Legislature for payment. Your Committee are of the opinion that orders drawn by only one of the Board, are illegal in all cases; and, further, that the Controller was unauthorized by law to issue the warrants if the majority of the Board had signed them.

Warrants to the amount of $47,748 72 were issued for supplies; of this amount, $31,143 99 were issued on orders signed by one Director, R. N. Snowden, only; and are, therefore, in the opinion of the Committee, illegal.

Forty-seven thousand four hundred and seventy-seven dollars and seventy cents were issued in warants, for the purchase of the State Prison property; the orders upon which $33,381 67, were issued, were signed by only one Director, Mr. Love, and are, for reasons named in another part of the report, unlawful; but your Committee are of the opinion that the whole amount, $47,477 70, is illegal, as they know of no law which authorized the Directors to make the purchases. Forty-eight thousand and seventy-six dollars and fifty-one cents were issued for payment of salaries of officers and subordinates, transporting prisoners, etc. Your Committee have not examined whether this amount was legally issued or not. The whole amount that your Committee report as having been illegally issued, is as follows:

On account of wall	$125,157 84
Purchasing property	47,477 70
Supplies	31,143 99
	$203,779 53

The Committee ask leave to be discharged from the further consideration of the subject.

Respectfully,

W. B. NORMAN, Chairman.

COMMUNICATION FROM CONTROLLER.

Office of Controller of State,
January 21st, 1856.

Hon. J. T. Farley,
Speaker of the House of Assembly:

Sir: Accompanying this, please find certified copies of the Contract entered into by the State Prison Directors and James Smiley, for the erection of a Wall at Point San Quentin, and also the Orders of the said Directors upon the State Controller; upon which Orders the amount of $125,157 84, in State Controller's Warrants, were drawn December 4th, 1855, and made payable to James Smiley, or J. S. Cohen, Attorney.

I am your obedient servant,

GEORGE W. WHITMAN,
Controller of State.

By Wm. Willis, Clerk.

AGREEMENT.

This Agreement, made this fifteenth day of August, in the year of our Lord one thousand eight hundred and fifty-five, by and between John S. Love, R. N. Snowden and William H. Palmer, Wardens of the State Prison, acting for and in behalf of the State of California, parties of the first part, and James Smiley, of the City and County of San Francisco, State of California, of the second part:

Witnesseth, That for and in consideration of the covenants hereinafter mentioned, the said James Smiley, party of the second part, agrees to build and construct for the party of the first part, a wall around the State Prison, situated at Point San Quentin, in the County of Marin, State of California; such Wall to be of the following dimensions, namely: Two thousand feet long, in the form of a square, each side of which is to be five hundred feet long, to be four feet in thickness at the base, or ground line, and to be carried up to the hight of ten feet above the ground, with stone, laid in cement, and then ten feet more in hight, to be built of brick, laid in line. The party of the first part hereby agrees to furnish, to the party of the second part, all the stone and brick necessary for the construction of the Wall, and to place them as near as the line of the Wall as practicable, and also all the Convict labor, that is necessary to attend to the masons, and other mechanics, that the party of the second part may employ in the fulfillment of this contract. And the party of the second part hereby agrees to furnish all other materials, excepting those hereinbefore mentioned, and also to furnish the mechanics to do the work. For and in consideration of all which, by the said party of the second part, the said party of the first part agrees to pay to the said party of the second part, forty cents per cubic foot for the stone laid in the Wall; said stone-work to be measured at the end of every two weeks, and a certificate of the amount given to the party of the second part, and orders drawn by the Wardens, parties of the first part, on the State Treasury, for the amount. The State to appoint its own Superintendent, and he to measure the same, and his measurement to be binding upon the party of the second part. The party of the first part furthermore agrees to pay, to the party of the second part, for all the brick laid in the Wall, at the rate of fifteen dollars per thousand, measured in the Wall; said measurement to be made by the Superintendent at the end of every two weeks, and orders to be drawn by the Wardens on the State Treasury for the amount. The party of the second part also agrees to furnish all the iron-work which may be necessary for said Wall; and the party of the first part agrees to pay for the same at the rate of ten cents per pound, by Wardens' orders on the State Treasury, as hereinbefore mentioned; and, furthermore, the party of the second part agrees to have the Wall and gates finished, and gates hung, by the first day of the month of January, eighteen hundred and fifty-six; *provided*, that

the stone and brick, hereinbefore mentioned, are furnished by the said party of the first part, as fast as desired by the said party of the second part.

In Witness whereof, we have hereunto set our hands and seals the day and year first above written:

RICH'D N. SNOWDEN, [SEAL.]
WM. H. PALMER, [SEAL.]
JNO. S. LOVE, [SEAL.]
JAMES SMILEY. [SEAL.]

Witness to the signature of R. N. Snowden; also, of Jno. S. Love,
GEO. GIBSON.
Witness to the signatures of Wm. H. Palmer and Jas. Smiley,
JOHN H. DALL.

OFFICE OF STATE PRISON,
Oct. 4th, 1855.

Please pay to the order of James Smiley, fourteen hundred and sixty-six dollars and fifteen cents, for supplies furnished for the use of the Prison from June 28th, to August 9th, as per account on file in this office.

JOHN S. LOVE,
Warden of State Prison.

To Hon. SAM. BELL, Controller.

Indorsed James Smiley.

OFFICE OF STATE PRISON,
Oct. 4th, 1855.

SIR: Please pay to the order of James Smiley, five thousand nine hundred and sixty-seven dollars and seventeen cents, for supplies furnished during the month of September, for the use of the Prison, as per account on file in this office.

JOHN S. LOVE,
Warden of State Prison.

To Hon. SAM. BELL, Controller.

Indorsed James Smiley.

OFFICE OF STATE PRISON,
Sept. 3d, 1855.

The Controller of the State will please pay to James Smiley or order, twenty thousand five hundred and fifty dollars, for materials furnished and labor performed in the erection of the Wall around the State Prison.

JOHN S. LOVE,
Warden of State Prison.

To Hon. SAM. BELL, Controller.

Indorsed James Smiley.

OFFICE OF STATE PRISON,
$25,524 70 Nov. 10th, 1855.

SIR:—Please pay to the order of James Smiley, twenty-five thousand five hundred and twenty-four dollars and seventy cents, for materials furnished and labor performed in the erection of the Wall around the Prison, and charge the same to account of the Prison.

JOHN S. LOVE,
Warden of State Prison.

To Hon. SAM. BELL, Controller.

Indorsed James Smiley.

OFFICE OF STATE PRISON,
Nov. 10th, 1855.

SIR:—Please pay to the order of James Smiley, three thousand three hundred and fifty-seven dollars and forty cents, for supplies furnished for the use of the Prison, as per bills on file in this office, and charge the same to account of the Prison.

JOHN S. LOVE,
Warden of State Prison.

To Hon. SAM. BELL, Controller.

Indorsed James Smiley.

Office of State Prison, }
Sept. 3d, 1855. }

Dear Sir:—Please pay to the order of James Smiley, five thousand and forty-four dollars, for provisions, lumber, iron, etc., furnished during the month of August, for the use of the State Prison.

JOHN S. LOVE,
Warden of State Prison.

To Hon. Sam. Bell, Controller.

Indorsed James Smiley.

Office of State Prison, }
$18,625 20. San Quentin, Marin Co., Sept. 25th, 1855. }

Sir:—Please pay to the order of James Smiley, eighteen thousand six hundred and twenty-five dollars and twenty cents, for labor done and materials furnished, in the erection of the Wall around the State Prison.

JOHN S. LOVE,
Warden of State Prison.

To Hon. Sam. Bell, Controller.

Indorsed James Smiley.

Office of State Prison, }
Oct. 24th, 1855. }

Sir:—Please pay to the order of James Smiley, thirty-one thousand two hundred and seventy-three dollars and twenty cents, for materials furnished and labor formed in the erection of the Wall around the State Prison, as per contract on file in this office.

JOHN S. LOVE,
Warden of State Prison.

To Hon. Sam. Bell, Controller.

Indorsed James Smiley.

OFFICE OF STATE PRISON,
Oct. 24th, 1855.

SIR:—Please pay to the order of James Smiley, thirteen thousand three hundred and fifty dollars, for brick-work and materials furnished in the erection of the Wall around the State Prison, as per contract on file in this office.

JOHN S. LOVE,
Warden of State Prison.

To Hon. SAM. BELL, Controller.

Indorsed James Smiley.

SAN FRANCISCO, Dec. 3d, 1855.

HON. SAM. BELL,
Controller of State:

J. S. Cohen is hereby authorized to receive, receipt for and transfer any Warrants due me as Contractor for building at the State Prison.

JAMES SMILEY.

OFFICE OF CONTROLLER OF STATE,
Sacramento, Jan. 21st, 1856.

I, George W. Whitman, Controller of the State, do hereby certify that the foregoing are full, true and correct copies of the original papers, now on file in my office, upon which the annexed amount of Warrants were drawn on the State Treasury.

In testimony whereof, I have hereunto set my hand and affixed my official seal, this the 21st day of January, A. D. 1856.

GEORGE W. WHITMAN,
Controller of State.

By WM. WILLIS, Clerk.

NO. AND AMOUNT OF WARRANTS ISSUED.

No. of Warrants.	To whom issued.	Amount.
588	James Smiley, or J. S. Cohen, Attorney	$5,157
589	" " " "	5,000
590	" " " "	5,000
591	" " " "	5,000
592	" " " "	5,000
593	" " " "	5,000
594	" " " "	5,000
595	" " " "	5,000
596	" " " "	5,000
597	" " " "	5,000
598	" " " "	5,000
599	" " " "	5,000
600	" " " "	5,000
601	" " " "	5,000
602	" " " "	5,000
603	" " " "	5,000
604	" " " "	5,000
605	" " " "	5,000
606	" " " "	5,000
607	" " " "	5,000
608	" " " "	5,000
609	" " " "	5,000
610	" " " "	5,000
611	" " " "	5,000
612	" " " "	5,000
	Total amount issued upon the accompanying vouchers	$125,157

Date of above issue, December 4th, 1855.

Respectfully submitted,

G. W. WHITMAN,
Controller of State.

By Wm. Willis, Clerk.

COPY OF THE RESOLUTION, UPON WHICH FOREGOING EXHIBIT WAS MADE.

Resolved, That the Controller of State be and is hereby directed, to furnish this House with the Contract heretofore entered into by the Prison Directors, for the erection of the Prison Wall, together with the amount of Warrants issued for the same, the date of such issue, the number of the Warrant, and to whom given or made payable.

" GEORGE."

Indorsed, Adopted January 19th, 1856.

J. M. ANDERSON,
Clerk of Assembly.

County of Sacramento, }
February 8th, 1856. }

Sam. Bell being sworn, says: That the vouchers in the Controller's Office, and copies of which are shown, are the only ones on which Controller's Warrants were issued for supplies and for building of the Wall of the State Prison since the 1st of July, 1855, and while he, deponent, was Controller of State. As Controller, I deemed myself authorized to issue said Warrants, under the Act, passed May 7th, 1855, concerning the State Prison.

SAM. BELL.

COPY OF COMMUNICATION UPON WHICH THE SUBJOINED VOUCHERS ARE SUBMITTED.

Hon. G. W. Whitman,
Controller of State.

Dear Sir: Will you have the goodness to give the undersigned, members of a Committee, a statement of all evidence in your office regarding contracts for beef and other supplies furnished the State Prison since that institution has been wholly under the control of the State.

Respectfully, yours,

W. B. NORMAN,
WM. J. SHAW,
E. G. WAITE;

Special Committee to examine the amount of Controller's Warrants issued in 1855, and to report on the legality of the same.

[$6,851 47, Warrant No. 613, issued in payment, Dec. 4th, 1855, to G. D. Bliss.]

State Prison of California, to G. D. Bliss, Dr.

June 18, 1855, to Beef Furnished State Prison from date to Oct. 26th, 61,943 lbs. 11 cents	$6,813 73
July 22d, 1855, to 185 lbs Mutton	37 84
	$6,851 47

We, the Directors of the State Prison, certify that the above amount of six thousand eight hundred and fifty-one dollars and fifty-seven cents is correct, and due G. D. Bliss for beef furnished the State Prison, and the Controller of State

will please draw a warrant for the same, there being no funds in the Treasury of the Prison.

JOHN S. LOVE,
JOHN F. MADDEN,
Directors of State Prison.

Point San Quentin, November 26th, 1855.

A.

[Per annexed statement from A to B. Warrants from No. 680 to 697, inclusive, were issued December 17th, 1855, amounting to $15,170 29. Warrants drawn in favor of Hamilton Bowie.]

State Prison to Hamilton Bowie, Dr.

October 3, 1855, to	Goods Furnished per Bill Annexed.....	$874	93			
" 8,	"	"	"		369	00
" 9,	"	"	"		633	51
" 11,	"	"	"		281	78
" 17,	"	"	"		50	55
" 19,	"	"	"		938	92
" 22,	"	"	"		235	34
" 24,	"	"	"		315	31
" 27,	"	"	"		97	60
" 31,	"	"	"		814	70
" 31,	"	"	"		3,230	00
					$7,841	64

San Francisco, December 12th, 1855.

I hereby certify that the above Bill of Provisions furnished the State Prison is correct, less eight hundred and fourteen dollars, before certified to.

Vouchers annexed,

RICHARD N. SNOWDEN,
President of the Board of State Prison Directors.

San Francisco, December 4th, 1855.

State Prison to Hamilton Bowie, Dr.

December 1st, 1855, to	Goods Furnished, per Bill Annexed.....	$490	17			
" 4th,	"	"	"		712	33
					$1,202	50

San Francisco, December 12th, 1855.

I hereby certify that the foregoing Bill of Provisions furnished is correct.
Vouchers annexed,

RICHARD M. SNOWDEN,
President of the Board of State Prison Directors.

San Francisco, November 28th, 1855.

State Prison to Hamilton Bowie, Dr.

November	2,	1855, to	Goods Furnished, per Bill Annexed		$158 00	
"	3,	"	"	"		1,277 19
"	5,	"	"	"		387 30
"	6,	"	"	"		377 34
"	7,	"	"	"		727 05
"	9,	"	"	"		570 66
"	12,	"	"	"		327 00
"	15,	"	"	"		335 34
"	19,	"	"	"		328 17
"	21,	"	"	"		324 48
"	23,	"	"	"		200 00
"	24,	"	"	"		307 20
"	25,	"	"	"		360 50
"	28,	"	"	"		445 92
					$6,126 15	

San Francisco, December 12th, 1855.

I hereby certify that the above Bill of Provisions furnished the State Prison is correct.
Vouchers annexed,

RICHARD N. SNOWDEN,
President of Board of State Prison Directors.

San Francisco, December 12th, 1855.

Mr. SAMUEL BELL,

Dear Sir: Please issue four hundred dollars of the scrip due me in favor of A. J. Butler, or order, with power to receipt for, transfer and sell the same, and oblige,

Your obedient servant,

H. A. BOWIE.

Accepted, December 12, 1855.

SAMUEL BELL.

I, Hamilton Bowie, of the City and County of San Francisco, State of California, do hereby appoint J. W. McCorkle my true and lawful attorney, for me and in my name, place and stead, to receive, receipt for and transfer State Controllers' Warrants due me, to the amount of seven hundred and sixty-six dollars. As witness, my hand and seal, this 14th day of December, A. D. 1855.

HAMILTON BOWIE, [SEAL].

San Francisco, October 31st, 1855.

State Prison to Hamilton Bowie, Dr.

October 31st, 1855, to	60 qr. sacks, 15 bbls. Flour, $18 66⅔	$280	00
" "	24 sacks Potatoes, weight 2,883 lbs, 5⅓ cents.	153	76
" "	4 sacks Salt, weight 570 lbs., 5 cents	28	50
" "	4 sacks Coffee, weight 661 lbs., 37½ cents	246	77
" "	4 sacks Sugar, weight 400 lbs., 18⅔ cents	74	67
" "	1 sack Rice, weight 50 lbs., 18 cents	9	00
" "	1 can Best Oysters	2	00
" "	1 box Crackers, weight 55 lbs., 20 cents	11	00
" "	1 lb. Nutmegs	3	00
" "	Drayage	6	00
		$814	70

[The above included in other vouchers.]

I hereby certify that the above account is correct.

RICHARD N. SNOWDEN,
President of Board of State Prison Directors.

San Francisco, December 11th, 1855.

B.

[Warrant No. 698, issued to Hamilton Bowie for $658 67, Dec. 17th, 1855.]

San Francisco, December 14th, 1855.

State Prison to Hamilton Bowie, Dr.

December 14th, 1855, to 8 Head of Cattle, delivered at State Prison to date, weight 3,952 lbs., at 16⅔ cents..... $658 67

I certify the above account is true and correct.

RICHARD N. SNOWDEN,
President of Board of State Prison Directors.

The above account was omitted in the former account certified to.

RICHARD N. SNOWDEN,
President of Board of State Prison Directors.

San Francisco, December 14th, 1855.

C.

[Per annexed statement from C to D, Warrants from 707 to 710 inclusive, were issued to Hamilton Bowie, December 26, 1855, $2,765 51.]

San Francisco, December 22d, 1855.

State Prison to Hamilton Bowie, Dr.

December 21st, 1855, to	6 sacks Coffee, weight 985 lbs., 37½ cts..	$367	73
" "	6 mats Sugar, weight 600 lbs., 18⅔ cts....	112	00
" "	4½ boxes Candles, 64 lbs., $1 15.....	73	60
" "	2 bbls. Butter, 203 lbs., $1 20.....	243	75
" "	1 box Pepper, 2 dozen, $5.....	10	00
" "	2 bbls. Molasses, 84 gallons, $1 30.....	109	20
" 22d,	Fresh Beef, 3,908 lbs., 20 cts.....	781	60
" "	59 sacks Potatoes, 7,039 lbs., 6 cts.....	422	34
" "	100 qr. sacks, 25 bbls. Flour, $19.....	475	00
" "	20 sacks Barley, 1,869 lbs., 5½ cts.....	102	80
" "	10 sacks Oats, 827 lbs., 5½ cts.....	45	49
" "	Drayage	22	00
		$2,765	51

I hereby certify that the foregoing account is correct, for provisions furnished for the use of State Prison, as per voucher annexed.

RICHARD N. SNOWDEN,
President of Board of State Prison Directors.

December 24th, 1855.

D.

December 21st, 1855, received from Hamilton Bowie, the following goods in good order and condition, for the use of the State Prison :

59 sacks of Potatoes, weighing, lbs		7,039
100 qr sacks Flour, "		5,000
20 sacks Barley, "		1,869
10 sacks Oats, "		827
6 sacks Coffee, "		985
6 mats Sugar, "		600
4½ boxes Candles, "		64
2 firkins Butter, "		203
2 bbls. Molasses, containing gallons		84
1 box Pepper, containing, dozen		2

ALEX. REED,
Commissary.

San Francisco, December 22d, 1855.

Received from Hamilton Bowie, in good order and condition, 3,908 lbs. fresh beef for the use of the State Prison.

ALEX. REED,
Commissary.

Dec. 24th, 1855.

Please send Warrants for the inclosed, and oblige,

Yours truly,

H. BOWIE.

Sam. Bell, Esq., Sacramento.

E.

[Per annexed statement from E. to F., Warrants from 713 to 714, inclusive, were issued December 28th, 1855, amounting to $9,743 26, Warrants drawn in favor of G. W. Ryckman.]

Directors of the California State Prison, to G. W. Ryckman, Dr.

Nov. 5, 1855, 3 dozen Collins' heavy Picks, at $30	$90 00
" 7, 8 kegs Nails, $10	80 00
" 9, 10 dozen Hickory Shirts, $12	120 00
" 12, 26 tons Hay, $33	910 00
" 12, 2,892 lbs. Potatoes, 3½c	101 00
" 13, 11,000 feet Redwood and Oregon Boards, $60	660 00
" 13, 2,000 feet ¾ inch Redwood and Oregon Boards, $50	100 00
" 15, 15 sacks Barley, 1,748 lbs., 5c	87 40
" 15, 15 sacks Oats, 1,125 lbs., 5c	56 25
" 15, 3,500 lbs. Flour, 7c	245 00
" 15, 6 bags Coffee, 840 lbs., 28c	235 00
" 15, 6 mats Sugar, 600 lbs., 15c	90 00
" 15, 1 bbl. Vinegar, 34½ gallons, 50c	17 25
" 15, 1 box Pepper, 3 dozen, $4	12 00
" 15, 2 dozen Brooms, $12	24 00
" 15, 2 dozen Pint Cups, $3	6 00
" 15, 2 dozen Tin Plates, $3	6 00
" 15, 2 dozen Table Spoons, $2 50	5 00
" 16, 2 kegs, 20 lbs. Nails, $12	24 00
" 16, 1 Desk Lock	1 50
" 19, 15 sacks Barley, 1,750 lbs., 5c	87 50
" 19, 15 sacks Oats, 1,125, 5c	56 25
" 19, 3,500 lbs. Flour, 7c	245 00
" 19, 2 bbls. Molasses, 60 gallons, 75c	45 00
" 19, 4 sacks Onions, 500 lbs., 12c	60 00
" 19, 1 gross Matches	5 00
" 19, 2 lbs. Shaker Sage	3 00
" 19, 2 lbs. Glue, 75c	1 50
" 19, 1 keg Choice June Butter, 125 lbs., 90c	112 50
" 20, 1,500 feet Redwood Boards, $60	90 00
" 21, 500 feet White Pine Clear Stuff, $120	60 00
" 21, 3 bags Coarse Salt, 480 lbs., 4c	19 20
" 21, 3 bags Fine Salt, 330 lbs., 5c	16 50
" 21, 3 boxes Adamantine Candles, 90 lbs., 90c	81 00
" 22, 2,500 feet Redwood Boards, $60	150 00
" 22, half-dozen Hand-saw Files	3 00
" 22, 2 dozen half Round Bastard Files, $2	4 00
" 22, 6 dozen Flat " " $2	12 00
" 22, 1 Chest Lock	1 50
" 22, 1,890 lbs Beef, 12c	225 90
" 22, 1 pair Chest Handles	2 00
" 22, 6,000 lbs Flour	420 00
" 23, 2,000 feet Redwood Boards, $60	120 00
" 24, 6,000 lbs. Flour, 7c	420 00
" 24, 400 lbs Soap, 12c	48 00

Nov. 24, 2,500 feet Redwood Boards, $6	$150 00
" 56, 2,500 lbs. Flour, 7c	175 00
" 26, half bbl Crushed Sugar	20 00
" 26, 2 boxes Salt Water Soap, 50 lbs	7 50
" 26, 1 box Pepper, 40 lbs., 50c	20 00
" 26, 10 kegs Lard, 570 lbs, 50c	235 00
" 26, 35 kegs Black Lead, 30c	10 50
" 26, 5 gallons Boiled Oil, $3	15 00
" 26, 1 large Tin Pan	3 00
" 26, 1 quart Turpentine, and Tin Can	2 00
" 27, 1 keg Choice June Butter, 108 lbs., 90c	97 20
" 27, 6 bags Coffee, 950 lbs., 28c	266 00
" 27, 6 mats Sugar, 600 lbs., 15c	90 00
" 27, 5 gallons best Sperm Oil, $3	15 00
" 27, 1 large Tin Can	3 00
" 27, 1,865 lbs Beef, 12c	223 80
" 27, 2 lbs. Thread, $1 50	3 00
" 27, 15 sacks Barley, 1,750, 5c	87 50
" 27, 15 sacks Oats, 1,125 lbs., 5c	56 25
" 27, 2 kegs 10-d Nails, 12c	24 00
" 27, 2 kegs 20-d Nails, 12c	24 00
" 27, 2 kegs cut Spikes, 12c	24 00
" 28, 2,248 lbs. Beef, 12c	269 76
	$7,000 76

Received payment by an order on the Controller's Office.

G. W. RYCKMAN.

Directors of California State Prison, to Geo. W. Ryckman, Dr.

Sept. 27, 1855, to 40½ cords Wood, delivered, at $10	$405 00
Oct. 1, 30¾ " " " "	307 50
" 2, 26 tons Hay, $35	910 00
" 2, 32 " $35	1,120 00
	$2,742 50

Received payment by order on the Controller of State.

G. W. RYCKMAN.

Sacramento, Dec. 28, 1855.

State of California to G. W. Ryckman, Dr.

For articles furnished State Prison, as per these two bills of items...$9,743 26

OFFICE OF STATE PRISON,
Dec. 17th, 1855.

SIR: Please pay to the order of G W. Ryckman, nine thousand seven hundred and fifty-three dollars and twenty-six cents, for wood and hay furnished during the months of September and October, and for provisions and other supplies furnished during the month of November, as per bills on file in this office.

JNO. S. LOVE,
RICHARD N. SNOWDEN.

Hon. SAM. BELL, Controller of State of California.

F.

[Warrant No. 752, issued in payment to Jno. F. McCauley, Dec. 31, 1855, $11,804 42.]

State of California to John F. McCauley, Dr.

Sept. 7th, 1855, to 106 head American Work and Beef Cattle, amounting to $11,804 42

We hereby certify the above bill to be correct, and that the said amount of eleven thousand eight hundred and four dollars and forty-two cents, is due John F. McCauley, for American cattle furnished to the State Prison of California.

RICHARD N. SNOWDEN,
President of the Board of State Prison Directors.

[Warrant No. 757, issued in payment, Dec. 31, 1855, to H. Bowie, $755 20.]

San Francisco, Dec. 28th, 1855.

State Prison to Hamilton Bowie, Dr.

Dec. 28, 1855, to Fresh Beef, 3,746 lbs., 20c	$749 20
Drayage	6 00
	$755 20

[DUPLICATE.]

State of California to Hamilton Bowie, Dr.

For supplies furnished State Prison..... $755 20

Received from Hamilton Bowie, in good order and condition, 3,746 lbs. fresh Beef.

ALEXANDER REED,
Commissary.

POINT SAN QUENTIN, December 28th, 1855.

RECAPITULATION.

No. of Warrants.	To whom Issued.	Date of the Issue.	Amount.
613	G. D. Bliss,	December 4th, 1855.	$6,851 47
*680 to 697	Hamilton Bowie,	December 17th, 1855.	15,170 29
698	Hamilton Bowie,	December 17th, 1855.	658 57
*707 to 710	Hamilton Bowie,	December 26th, 1855.	2,765 51
*713 and 714	G. W. Ryckman,	December 28th, 1855.	9,743 26
752	J. F. McCauley,	December 31st, 1855.	11,804 42
757	Hamilton Bowie,	December 31st, 1855.	755 20
	Total.....		$47,748 72

* Supplies for the State Prison.

OFFICE OF CONTROLLER OF STATE,
Sacramento, Jan. 25th, 1856.

I, G. W. Whitman, Controller of State, do hereby certify that the foregoing are full, true and correct copies of the original Vouchers, now on file in my office, upon which the accompanying Warrants (a statement of which is herewith submitted,) were issued.

In testimony whereof, I have hereunto set my hand, and affixed my official seal, this, the 25th day of January, A. D. 1856.

GEORGE W. WHITMAN,
Controller of State.

By WM. WILLIS, Clerk.

To Messrs. W. B. NORMAN, WM. J. SHAW, and E. G. WAITE,
Committee to Examine Warrants, etc.

GENTLEMEN :—Accompanying, I have the honor to submit a statement of the Warrants issued in 1855, on account of supplies for the State Prison. Trusting it may meet the requirements of your communication,

I remain,
Your obedient servant,

G. W. WHITMAN.

By WM. WILLIS, Clerk.

No. 1.

[Warrants from 61 to 67 were issued July 7th, 1855, to the amount of $33,000. Palmer, Cook & Co. received $25,000, and Estell & Woods $8,000.]

$25,000. San Francisco, Cal., June 13th, 1855.

Pay to Messrs. Palmer, Cook & Co. or order, twenty-five thousand dollars, in State Controllers' Warrants, out of the first, issued for property purchased of us, by the State of California, for State Prison purposes and use, and oblige,

Your obedient servants,

ARCH'D WOODS,
J. M. ESTELL.

To the Board of Directors of the California State Prison.

June 13th, 1855.

Accepted, to be paid out of the first moneys or warrants that may come into our hands, or may be subject to our order, belonging to said Estell & Woods.

JNO. S. LOVE,
RICH'D N. SNOWDEN,
WM. H. PALMER.

State of California to James M. Estell & A. Woods, Dr.

July 6th, 1855, to amount of Property purchased by the State Prison Directors, for the use and benefit of the State..... $33,000

OFFICE OF STATE PRISON,
July 6th, 1855.

I hereby certify that the above amount of Property was purchased by the State Prison Directors, for the immediate use and benefit of the State Prison, and that the same was indispensably necessary for the use and benefit of the State Prison.

JNO. S. LOVE,
Warden of State Prison.

No. 2.

[Warrant No. 212 issued to Van Houghton & Co., Aug. 2d, 1855, for $702 98.]

$702 93. San Francisco, June 14th, 1855.

The Directors of the California State Prison:

Please pay to order of Van Houghton & Co., seven hundred and two dollars and ninety-eight cents, out of any State Controllers' Warrants due me after July 1st, 1855.

J. M. ESTELL.

OFFICE OF STATE PRISON,
July 14th, 1855.

I hereby certify the above order to be a portion of the amount to be paid J. M. Estell & A. Woods, according to contract with them for property bought by the Directors, of A. Woods, for the use of State Prison of California.

JNO. S. LOVE,
Warden of State Prison.

Indorsed, June 14th, 1855, Accepted as one of the Board of State Prison Directors.

WM. H. PALMER,
JNO. S. LOVE,
RICH'D N. SNOWDEN. } Directors.

State of California to Van Houghton & Co., Dr.

For Property purchased at State Prison..... $702 98

Sacramento, Aug. 2d, 1855.

No. 3.

[Warrant No. 282, issued Aug. 24th, 1855, to Thos. Russell, for $248.]

$248. San Francisco, June 18th, 1855.

The Directors of the California State Prison:

Please pay, on the 6th day of July next, to order of Thos. Russell, two hundred and forty-eight dollars, in State Controllers' Warrants, due me, and oblige.

J. M. ESTELL.

We accept to pay the within, when the agreement between the parties concerned is made perfect.

JNO. S. LOVE,
WH. H. PALMER, } State Prison Directors.

June 20th, 1855.

Office of State Prison,
August 20th, 1855.

Hon. Sam. Bell,
Controller of State:

Sir: The order held by Thomas Russell, for two hundred and forty-eight dollars, drawn by J. M. Estell, on the State Prison Directors and myself, is a part of the payment we were to make to Estell, for property purchased of him, and stands in the same category as those already audited by you; you will please pay the same.

Very respectfully, yours, etc.,

JNO. S. LOVE,
Warden of State Prison.

State of California to Thomas Russell, Dr.

For purchase of Property on account of State Prison..... $248

Sacramento, Aug. 24th, 1855.

No. 4.

[Warrants from 636 to 640, issued Dec. 5th, 1855, to J. M. Estell, for $2,500.]

$2,500. San Francisco, June 18th, 1855.

The Directors of the California State Prison:

Please pay, on the 6th day of July next, to the order of Gardiner Elliot and Cook & Cohen, twenty-five hundred dollars, in State Controllers' Warrants, due me, and oblige,

J. M. ESTELL.

Accepted, to be paid out of any moneys due the said Estell and A. Woods, in compliance with agreement with them June 18th, 1855.

JNO. S. LOVE,
WM. H. PALMER,
RICH'D N. SNOWDEN. } State Prison Directors.

No. 5.

$381 67.

The Directors of the California State Prison:

Please pay, on the 6th day of July next, to order of E. Whiting, three hundred and eighty-one dollars and sixty-seven cents, in State Controllers' Warrants, due me, and oblige,

J. M. ESTELL.

June 29th, 1855.

We, the undersigned, Directors of the State Prison, guarantee payment of this order, when the agreement on the part of A. Woods is complied with.

JNO. S. LOVE,
Warden of State Prison.

RICH'D N. SNOWDEN.

$381 67.

I hereby certify that the within order is part of the amount to be drawn for on the Controller of State, for property purchased from A. Woods, for the use of the State Prison, and is included in, and part of, the schedule of property filed with the article of agreement between said Woods and the State Prison Directors.

JNO. S. LOVE,
Warden of State Prison.

Please deliver within described Controllers' Warrant to Wells, Fargo & Co.
E. WHITING.

$3,000. San Francisco, May 30th, 1855.

Hon. Sam Bell,
Controller of State:

Will please issue to the order of James S. Graham, three thousand dollars of such Scrip, as may become due, on which you may be authorized to issue, on account of property purchased for the State Prison.

J. M. ESTELL.

Accepted May 30th, 1855.

SAM. BELL,
Controller of State.

Dear Sir: Above I send an order for Scrip to be issued, please file it in your office, and when it is issued, issue it to me; I understand it is the first order.

J. B. HIGGINS.

Indorsed, for value received, pay to the order of J. B. Higgins.
Jas. S. Graham.

$417 20. San Francisco, June 18th, 1855.

The Directors of the California State Prison:

Please pay, on the 6th day of July next, to order of Andrew Hepburn, four hundred and seventeen dollars and twenty cents, in State Controllers' Warrants, due me, and oblige,

J. M. ESTELL.

We accept and agree to pay the within as soon as the agreement between the parties are complied with.

JOHN S. LOVE, } State Prison
WM. H. PALMER. } Directors.

Indorsed, Andrew M. Hepburn.

SCHEDULE

Of Orders drawn by Gen. James Estell on the Directors of the State Prison, and accepted by them.

Asa Estes	$1,235 38
M. Turner	504 46
P. Foley, (order not sent)	134 40
G. W. Welles	237 84
C. W. Robinson	304 58
G. A. Woods	46 17
H. Morgan	471 66
H. N. Cabell	243 66
H. Bristol	286 83
J. M. Gray	216 33
H. Andrews	184 42
J. M. Kensy	339 50
P. J. Fisk	140 33
A. Reed	364 11
J. M. Smith	144 50
H. Young	234 50
G. Millgratte	129 50
A. H. Pillow	1,041 25
F. N. Russell	223 33
B. F. Pullen	103 44
E. Russell	50 00
John Johnes	71 67
Irish Milton	108 33
Jno. Gibson	159 99
Robert Perry	251 67
	$7,227 85

STATE PRISON OF CALIFORNIA, July 11th, 1855.

We, the Directors of the State Prison, hereby certify, that the amount of seven thousand two hundred and twenty-seven dollars and eighty-five cents, the amount of the schedule of the within orders, is for property bought of J. M. Estell and A. Woods, for the use of the State Prison, and that the property was necessary for the purpose of conducting the business of the Prison.

RICH'D N. SNOWDEN, JNO. S. LOVE. } State Prison Directors.

To Hon. SAM. BELL, Controller.

[Warrants from 150 to 178 were issued July 28th, 1855, $11,026 72.]

San Francisco, June 1st, 1855.

To the Directors of the California State Prison:

Gentlemen:—I hereby authorize James M. Estell to receive any money due me on account of property sold to the State Prison Directors, for the use and benefit of the State, and will be fully bound by his individual signature.

A true copy. Signed, ARCH. WOODS.

RECAPITULATION.

July 7th, 1855,	Estell & Woods	$33,000	00
Aug. 2d, "	Van Houghton & Co	702	98
Dec. 24th, "	Thos. Russell	248	00
Dec. 5th, "	J. M. Estell	2,500	00
July 28th, "	J. M. Estell	11,026	72
Total amount issued for purchase of State Prison Property		$47,477	70

Office of Controller of State,
January 26th, 1856.

I, George W. Whitman, Controller of State, do hereby certify, that the amount of forty-seven thousand four hundred and seventy-seven dollars and seventy cents, in Controllers' Warrants, have been issued on account of purchase of property for the use of the State Prison, and that the accompanying vouchers are full, true and correct copies of the originals now on file in my office.

In testimony whereof, I have hereunto set my hand and affixed my my Official Seal this, the 26th day of January, A. D. 1856.

GEORGE W. WHITMAN,
Controller of State.

By Wm. Willis, Clerk.

COMMUNICATION FROM TREASURER.

STATE TREASURER'S OFFICE,
Sacramento, January 25, 1856.

Hon. W. B. NORMAN, Chairman Committee:

SIR: I am in receipt of your communication of yesterday, requesting me to furnish you with a list, which can be authorized on oath, of all warrants registered in my office which were issued for the payment of State Prison purposes. Accompanying this, I have the honor of transmitting to you a correct list of said warrants, registered in due form on the books in this office.

I am, very Respectfully,
Your Obedient Servant,

HENRY BATES,
State Treasurer.

ABSTRACT

Of Warrants issued for Account of State Prison.

Date.	No.	To Whom Issued and Purpose.	Amount.	
1855.				
July 2..	30	R. Heuth, transporting prisoners.....	$465 00	
" 5..	46	D. N. Hunt, " "	1,085 00	Paid.
" 7..	61	J. M. Estell or A. Woods, purchase of property.....	4,000 00	"
	62	" " " "	4,000 00	"
	63	" " " "	5,000 00	"
	64	" " " "	5,000 00	"
	65	" " " "	5,000 00	"
	66	" " " "	5,000 00	"
	67	" " " "	5,000 00	"
" 12.	91	M. Gray, transporting prisoners	220 00	
" 19.	101	John Boling, " "	265 00	
" 17.	108	H. Johnson, " "	55 00	
" 17.	109	" " "	55 00	"
" 31.	161	J. M. Estell & Woods, or H. Cabell, purchase of property.	143 66	"
	162	" " H. Bristol, " " .	286 83	"
	163	J. M. Estell or J. M. Gray, purchase of property.....	216 33	"
	164	" H. Andrews, " "	184 42	"
	165	" J. M. Kinsey, " "	339 50	"
	166	" " " "	140 33	"
	167	" A. Reid, " "	364 33	"
	168	" M. Smith, " "	144 50	"
	169	" H. Young, " "	234 50	"
	170	" G. Milgate, " "	129 50	"
	171	" T. M. Kimmell, " "	223 33	"
	172	" B. F. Pullen, " "	103 44	"
	173	" E. Remmell, " "	50 00	"
	174	" John Jones, " "	71 67	"
	175	" J. Miller, " "	108 33	"
	176	" J. Gibson, " "	159 99	"
	177	" R. Pinney, " "	251 67	"
	178	" A. H. Pillon, " "	1,041 25	"
August 2	150	" Mr. Whitney, " "	381 67	"
	151	J. M. Estell & Woods, or B. Hoggins, purchase of property	3,000 00	"
	152	" " D. O. Mills " "	417 20	"
	153	" " T. Folley, " "	134 40	"
	154	" " A. Estes, " "	1,235 38	"
	155	" " W. Turner, " "	504 46	"
	156	" " G. W. Walls, " "	237 84	"
	157	" " C. Robinson, " "	304 56	"
	158	" " G. W. Woods, " "	46 17	"
	159	" " H. Morgan, " "	471 66	"
	160	" " H. N. Cabell, " "	100 00	"
July 28.	183	P. L. Soloman, transporting prisoners.....	235 00	
	184	" " "	235 00	"
	186	R. N. Snowden or D. J. Thomas, salary of Director.....	100 00	
August 2	211	C. A. Clarke or C. W. Settler, transporting prisoners.....	440 00	"
	212	Van Houghton & Co., purchase of property	702 98	"
" 7	229	R. W. Armstrong, transporting prisoners.....	190 00	"
" 9	240	W. McCutcheon, " "	75 00	"
	241	" " "	150 00	"
" 20	272	M. Gray, " "	1,320 00	"
	273	M. T. Blake, " "	370 00	"

ABSTRACT—CONTINUED.

Date.	No.	To Whom Issued and Purpose.	Amount.	
1855.				
	274	D. E. Buel, transporting prisoners	$820 00	Paid.
Aug. 22.	278	W. W. Wright, " "	225 00	"
" 24.	282	T. Russell, purchase of property	248 00	"
" 28.	290	D. N. Hunt, transporting prisoners	1,240 00	"
Sept. 4.	339	John Boling, " "	795 00	"
	340	" " "	795 00	"
" 8.	352	W. W. Wright, " "	225 00	"
" 9.	376	D. E. Buel, " "	205 00	"
" 24.	382	W. A. McNally, " "	380 00	"
" 28.	387	C. A. Clarke, " "	880 00	"
Oct. 1..	416	J. A. Douglass, " "	312 00	"
" 8..	435	B. F. Pullen, salary of Attachés	200 00	"
" 8..	436	E. Russell, " "	376 00	"
	437	R. N. Snowden, " Director	200 00	
	438	" " "	58 34	
	439	" " "	875 00	
" 9..	446	J. McClatchen, salary of Attachés	180 00	"
	449	Wm. Byrnes, " "	100 00	"
	450	W. Gift or G. Read, " "	133 33	"
	451	J. Estell " " "	230 00	"
	452	T. Watson " " "	256 66	"
	454	L. G. Caldwell, transporting prisoners	135 00	
	455	O. K. Stampley, " "	270 00	"
	457	J. Schuferly, " "	335 00	"
	458	W. W. Wright, " "	450 00	"
" 17..	460	E. B. Carson, " "	123 00	"
	461	E. P. Hilsbie or M. G. Reed, salary of Attachés	200 00	"
	462	G. W. Honk, salary of Attachés	250 00	"
	463	E. Waller, " "	53 33	"
	465	B. Ferrick, " "	240 00	"
	466	R. Goodsen, " "	140 00	"
Nov. 6..	467	J. McNabb, " "	100 00	"
	501	W. W. Winters, " "	100 00	"
" 9..	509	J. T. Stewart, " "	276 66	"
" 9..	560	R. N. Snowden, salary of Director	191 61	"
" 14..	518	W. Burns or E. Jones, salary of Attachés	196 66	"
" 22..	527	J. Larkin or Wormser, " "	100 00	"
	529	J. M. Lane, " "	66 66	"
" 27..	541	Andrew Brady, " "	253 33	"
" 29..	549	A. McAllister or E. Jones, " "	110 00	"
Dec. 4..	573	H. Bristol, " "	490 00	"
" 4..	576	W. Winters or M. G. Reed, " "	93 34	"
	577	A. Andrews, " "	276 66	"
	578	J. S. Love, salary of Director	1,166 68	"
	579	A. W. Taliaferro, salary of Attachés	702 00	"
	588	J. Smiley or J. S. Cohen, labor and materials	5,157 84	
	589	" " "	5,000 00	
" 4..	590	" " "	5,000 00	
	591	" " "	5,000 00	
	592	" " "	5,000 00	
	593	" " "	5,000 00	
	594	" " "	5,000 00	
	595	" " "	5,000 00	
	596	" " "	5,000 00	
	597	" " "	5,000 00	
	598	" " "	5,000 00	
	599	" " "	5,000 00	
	600	" " "	5,000 00	

ABSTRACT—Continued.

Date.	No.	To Whom Issued and Purpose.	Amount.
1855.			
Dec. 4..	601	J. Smiley or J. S. Cohen, labor and materials	$5,000 00
	602	" " "	5,000 00
	603	" " "	5,000 00
	604	" " "	5,000 00
	605	" " "	5,000 00
	606	" " "	5,000 00
	607	" " "	5,000 00
	608	" " "	5,000 00
	609	" " "	5,000 00
	610	" " "	5,000 00
	611	" " "	5,000 00
	612	" " "	5,000 00
	613	G. D. Bliss, "	6,851 47
	615	C. O. Keefe, salary of Attache	300 00
	616	N. A. Hobbs or M. G. Read, salary of Attache	400 00
	618	A. Estes, salary of Attache	511 85
	619	J. M. Gray, " "	291 94
	620	R. Perry, " "	250 00
	621	G. W. Woods, " "	293 33
	622	C. Frazier, " "	70 00
	623	J. W. McKenzie, " "	326 66
	624	J. Gray, " "	252 33
	625	E. Brannan, " "	277 67
Dec. 5..	626	John Spoll, " "	356 66
	627	F. W. Russel, " "	325 26
	628	John Jones, " "	400 00
	629	H. Catron, " "	400 00
	630	H. E. Young, " "	285 26
	631	C. W. Robinson, " "	400 00
	632	R. Smith, " "	63 33
	633	A. C. Caball, " "	371 93
	634	P. Burns, " "	193 34
	635	S. Root, " "	120 00
	636	H. Elliott, Cook & Copan, purchase of property	500 00
	637	" " " " "	500 00
	638	" " " " "	500 00
	639	" " " " "	500 00
	640	" " " " "	500 00
" 6..	642	Milton Irish, salary of Attache	400 00
" 7..	648	R. N. Snowden or M. G. Read, salary of Director	291 67
" 11..	650	—— Tashton or M. G. Read, salary of Attache	130 00
" 13..	676	J. R. Richards " " "	200 00
	677	J. McNabb " " "	180 00
	678	W. H. Palmer " " "	1,322 19
	679	A. H. Pillow " " "	867 00
	680	H. Bowie or A. J. Butler, provisions	400 00
	681	" J. W. McCorkle "	766 00
	682	" M. G. Read, "	640 00
	683	" " "	174 40
	684	" " "	150 00
	685	" " "	150 00
	686	" " "	150 00
	687	" " "	150 00
	688	" " "	589 59
	689	" " "	500 00
	690	" " "	500 00
	691	" " "	500 00
" 14..	692	" provisions	500 00

ABSTRACT—Continued.

Date.	No.	To Whom Issued and Purpose.	Amount.
1855.			
Dec. 14..	693	H. Bowie, provisions	$1,000 00
	694	" "	1,000 00
	695	" "	1,000 00
	696	" "	2,000 00
	697	" "	5,000 00
	698	" "	658 57
" 18..	700	W. A. Hobbs or J. and S. Wormser, salary of Attache	200 00
" 19..	701	A. Reed, salary of Attache	442 50
" 21.	702	Leroy Knight, " "	383 34
" 26..	707	H. Bowie, provisions	1,000 00
	708	" "	1,000 00
	709	" "	500 00
	710	" "	265 51
" 28..	712	H. Morgan, salary of Attache	777 77
	713	G. W. Ryckman, supplies	5,000 00
	714	" "	4,743 26
" 29..	715	W. Burns or M. G. Reed, salary of Attache	150 00
" 31..	721	Asa Estes, salary of Attache	135 00
	749	John S. Love, " Director	875 00
	750	C. O. Keefe " Attache	100 00
	751	J. F. Madden, " Director	719 45
	752	J. F. McCauley, supplies	11,804 42
	756	R. N. Snowden or Read, salary of Director	291 67
	757	H. Bowie, supplies	755 20
Jan. 2 '56	759	J. M. Smith, salary of Attache	523 33
	763	Armstrong or E. Jones, salary of Attache	280 00
" 3..	764	F. W. Russell, salary of Attache	300 00
	765	H. S. Cabell, " "	293 66
	766	J. W. Gray, " "	390 00
	767	E. F. Gray, " "	300 00
	768	J. McKenzie, " "	278 60
Dec. 4 '55	747	A. W. Taliaferro, " "	625 00
Jan. 4..	773	N. Randall, " "	276 66
	774	H. Cstron, " "	300 00
	775	M. M. Kinsey, " "	283 33
	776	T. Simpson, " "	100 00
	777	J. Lansing, " "	55 33
" 5..	783	E. Terry, " "	100 00
	784	J. Ryder, " "	333 33
" 7..	785	S. Terry, " "	46 67
	787	B. Tinweek or A. Ball, salary of Attache	150 00
	788	" " " "	149 50
" 8..	790	J. T. Stuart, salary of Attache	300 00
	791	A. Andrews, " "	300 00
	792	Thomas Slater, " "	156 66
	798	W. B. Robertson, " "	70 00
" 9..	803	P. Burns, " "	300 00
	804	C. Brennan, " "	300 00
	801	R. Perry, " "	299 60
	802	R. Goodsell, " "	300 00
	811	J. Hess, " "	300 00
	810	J. Spud, " "	300 00
	807	J. Larkin. " "	200 00
	827	J. English, " "	276 66
	828	J. M. Gray, " "	250 10
	829	G. W. Gilchrist, " "	276 66
	830	M. Irish, " "	293 60
	831	R. Smith, " "	281 50

ABSTRACT—Continued.

Date.	No.	To Whom Issued and Purpose.	Amount.
1855.			
Jan. 9..	832	W. Snyder, salary of Attache	$276 66
	833	S. Root, " "	300 00
	834	G. W. Woods, " "	386 00
" 11..	835	H. Young, " "	300 00
	840	W. Turner, " "	408 04
	841	Geo. Lee, " "	180 00
" 14..	844	J. O. Connor, " "	1,368 00
	845	N. Smith, " "	999 00
	846	W. Milling, " "	873 00
" 18..	996	G. W. Walls, " "	598 60
	997	John Jones, " "	298 60
	998	D. Virnger, " "	243 34
" 22..	1148	A. T. George or L. S. Downey, salary of Attache	133 33
" 24..	1250	C. Fragg, salary of Attache	300 00
		Total	$268,460 77

State Treasury Department, Cal.
Sacramento, Jan. 25th, 1856.

I certify the foregoing to be a true transcript from the books of this office.

Amount paid	$62,436 26
Amount unpaid	206,024 51
Total	$268,460 77

HENY BATES,
State Treasurer.

Document No. —

IN SENATE] [SESSION OF 1856.

REPORT

OF

SPECIAL COMMITTEE

TO WHOM WAS REFERRED

AN ACT TO AMEND AN ACT ENTITLED "AN ACT TO PROVIDE FOR THE FORMATION OF CORPORATIONS FOR CERTAIN PURPOSES."

SUBMITTED MARCH 12, 1856.

JAMES ALLEN STATE PRINTER

REPORT

Mr. President:

The Committee to whom was referred an Act to amend an Act entitled an Act to provide for the formation of Corporations for certain purposes, approved April 14, 1853,

And an Act to amend an Act entitled an Act concerning Corporations, passed April 22, 1850,

Have had the same under consideration and ask leave to make the following Report:

The importance of the subject embodied in this Report, and the magnitude of the evils which the Acts named propose to remedy, require a greater amount of investigation, and consequently more time, than the Committee are able to bestow upon them.

Owing to unguarded legislation in the enactment of general corporation laws, two powerful monopolies have been created in this State, which, as the Committee will endeavor to show, extract annually from the industry and commerce of the country more money than is paid into the Treasury of the State from all its sources of revenue. It is a fact well known, or, if not well known, it is time that it should be, that the entire carrying trade of the Sacramento river and its tributaries is done by two incorporated companies; one of which, and by far the most powerful, is known as the California Steam Navigation Co., and the other as the Citizens' Steam Navigation Company Since these companies have had the control of the carrying trade, prices have at times been so high as to amount almost to extortion, and even now they are much higher than there is any actual necessity for. At present, when, perhaps, they have the fear of legislative interference before them, they charge for carrying cabin passengers six dollars from this city to San Francisco, and but a few weeks ago they charged seven dollars. At present, they charge for freight from San Francisco to this city, five dollars per ton, while only a short time ago they charged six dollars. Last year (and we speak on the authority of a steamboat captain who has had much experience on our rivers,) the prices ruled much higher than they have this, and on the year previous to the last, prices ruled still higher. We propose, then, to give the following as the average prices which have been charged by the incorporated Steam Companies, per day, since the time of their organization, and we fully

believe that the prices here set forth are much less than those actually received by them:

FROM SAN FRANCISCO TO SACRAMENTO—DISTANCE 120 MILES.

Rate for Cabin Passengers, at 5 5-6 cts. per mile, - - - - -	$7 00
Rate for Deck Passengers, at 4 1-6 cts. per mile, - - - - -	5 00
Rate for Freight, per ton, 5 cts. per mile, - - - - - -	6 00

The Acts herewith transmitted to the Senate propose to reduce the foregoing rates to the following standard:

FROM SAN FRANCISCO TO SACRAMENTO.

For Cabin Passengers, at 3½ cts. per mile, - - -	$4 20
For Deck Passengers, at 2 cts. per mile, - - -	2 40
For Freight, 3 cts per mile, per ton, - - - -	3 60

If it were necessary to say anything to show that the prices named in the acts under consideration are extremely liberal, we might adduce the fact, that cabin passengers on the Mississippi and Ohio rivers, (where freight and passage are much higher than in any other portion of the United States, except California,) can travel from New Orleans to Cincinnati, a distance of about sixteen hundred miles for twelve dollars, and this includes board and lodging during the trip, which generally occupies six or eight days.

The Acts referred to, propose to allow four dollars and twenty cents as the price of cabin passage for one hundred and twenty miles, without board or lodging—a distance which can be traveled between daybreak and dark. For traveling sixteen hundred miles, at the prices named in the Acts referred to, (three and a half cents per mile for cabin,) would amount to fifty-six dollars—board and lodging extra—which is just forty-four dollars more than is charged in the southern Atlantic States, for travelling the same distance, with board and lodging included.

After making this statement, we think the most ardent friends of monopoly will not say the prices named in the Acts are too small to be remunerative.

In regard to carrying freight, we would only remark, that brigs, schooners, &c., are now carrying freight from San Francisco to this city for three dollars per ton, and find it a paying business, whilst the Acts under consideration propose to allow the incorporated companies three dollars and sixty cents per ton. We think that steamboats should carry freight on rivers full as cheap as sail vessels, because they can, owing to their speed, make a great many more trips within a given time.

We do not propose to give the distance from San Francisco to Marysville, nor from San Francisco to Colusi, or Red Bluffs; it is much greater, however, than the distance from San Francisco to Sacramento, or Stockton, which two latter places are just the same distance, (one hundred and twenty miles,) from San Francisco. We propose, then, to consider one hundred and twenty miles the average distance for carrying freight, by the Steam Companies on the Sacramento river and its tributaries.

Let us now make a calculation, by which we may approximate somewhat near the truth, as to the amount that the people of this State, and especially the mining portion of them are taxed annually, in order simply to make the rich richer, and the poor poorer:

We have the report of Mr. Meeker to the Board of Aldermen of this city, which gives the number of tons which arrived at Sacramento from San Francisco, on the boats of the Steam Companies during last month, as two hundred and thirty-five tons daily. Mr. Meeker thinks it would be perfectly safe to estimate the number of tons of freight arriving at this place daily, by the above boats, per annum, at two hundred and fifty tons. For our own part, we think even that much less than the average; for there are often more boats running than at present. But to be safe in our calculations, let us say that the number of tons arriving here daily is two hundred and fifty. The average rate charged by the combination is, say, six dollars per ton, which on two hundred and fifty tons, amounts to fifteen hundred dollars per day. The rate proposed by the present Acts, which we think we have already shown to be liberal in the extreme, is three dollars and sixty cents per ton, which on two hundred and fifty tons, would amount per day to nine hundred dollars. Making a daily difference in favor of the Acts of six hundred dollars. The boats of the combination do not run on Sundays, so that we must count in our calculation only six days to the week. Then we have in one week, a difference between a fair price and that which is charged by the incorporated companies, of - - - $3,600
In a month of twenty-four days, of - - - - 14,400
In one year the difference amounts to - - - - 172,800

We have here shown that from the arrivals at this point alone $172,800 are paid annually by the people to gratify the remorseless and insatiable love of gold which characterizes business corporations generally.

Let us pursue our researches further. We find that two boats arrive here daily, and that they have boats running to Stockton, Marysville, Colusi and Red Bluffs daily. If the two boats running to this point carry two hundred and fifty tons daily, we think it a low estimate to say that the others carry three hundred and fifty tons daily; and as they travel further, their profits are supposed to be greater; but, as we wish rather to make under estimates than to shoot wild of the mark, let us say 350 tons. Now, for transporting three hundred and fifty tons per day, the difference between the price charged by the Combination and that proposed to be charged by the Acts under consideration, would amount (calculating for the same distance, 120 miles,) to $840, making a difference in one month of $20,160, and a difference in one year of $241, 920. Now, add this amount to the difference which the Acts propose to make in the price of freight that arrives at Sacramento in one year, and we have the snug little sum of $414,720.

It is thought by the Committee, that the passage of these Acts would save the above amount to the people annually; for even though the corporations should dissolve, a fair competition would spring up, and reduce the prices to those already named.

How does the matter stand with regard to carrying passengers? We have conversed with gentlemen well acquainted with the business, and who profess to know, and they say that as two boats leave San Francisco for this city daily, and that as two leave this city for San Francisco daily, that 400 passengers, at the very least, are carried on these boats each day. Suppose one half to be cabin passengers, then 200 daily, at $7 each, which we give as the average charged by the Corporations, would amount in one year to $408,200. The Acts propose to charge $4 20 for each cabin passenger, which, in one year, amounts to $241,920, making a difference per annum in favor of the people, and, therefore, in favor of the passage of these Acts, of $161,280.

At the rate charged for carrying deck passengers by the incorporated companies, from this city to San Francisco, and from San Francisco here ($5 00 each) would be daily, for two hundred, $1,000. By the Acts under consideration ($2 40 each)

Another precedent is afforded for the passage of the Acts accompanying this report, in the Act concerning Corporations, passed April 22, 1850.

Section 20 of that Act says, "The Legislature may, at any time, amend or repeal this Act and charters of corporations created under it." But the framers of our Constitution, one of the wisest bodies of men, and dealt with a laudable desire to protect the people from the insidious encroachments of corporations such as these, placed the following clause in the organic law, Art. 4, section 31:

"Corporations may be formed under general laws, but shall not be created by special Act except for municipal purposes. All general laws and special Acts passed pursuant to this section, may be altered from time to time, or repealed."

It may be argued that corporations exist by contract with the State and that the corporations under consideration have acquired vested rights under the law which entitled them to incorporate. If the law under which they incorporated was a part of the contract, to time was the Constitution a part of the contract; for it is from that instrument alone that the Legislature derived the power to enact the law. We find, then, in the Constitution, that all laws passed for the aid of corporations may be altered from time to time, or repealed, and this becomes clearly manifest that corporations cannot acquire rights which are beyond legislative control. The language, in this section of the Constitution, is too plain to be misinterpreted. It would be folly to say, that we might alter or repeal the laws on the subject, but that the corporations would still exist, and that we could not interfere with rights which they obtained under those laws, however contrary those rights might be to public policy, or however dangerous to the interests of the State. If the view of the case is not correct, the framers of our Constitution were guilty of placing in that instrument language, which, if not nonsense, is at least most ambiguous, signifying nothing. But these gentlemen were men of learning and ability and we are well assured that every clause in that organic instrument was put there for a wise and useful purpose.

It may be urged, that the passage of these Acts would not accomplish the object sought to be obtained; that even though the corporations were dissolved, that they could form a partnership, and that the evils complained of would, in that case, be just as great as at present. We think it is a sufficient answer to say that our power can only dissolve the partnership by application to a Court of Chancery, for corporations cannot be dissolved (see Statutes of 1855, pages 91 and 92,) unless two-thirds of the stockholders vote to discorporate. But it is not presumed by the corporate rulers it is only feared that freight and passengers would be carried for a reasonable price, and if corporations cannot afford to carry for that, why, let them dissolve and allow fair competition to take their place.

Having shown, Mr. President, that the industry and the commerce of the State are seriously injured by certain of these great monopolies, and believing, as we do, that the evils complained of may be, to a great extent remedied by the passage of the Acts which accompany this report, we most earnestly recommend them to the favorable consideration of the Senate. By passing them, the Legislature will at least show that they are willing to shield the rights of the people from the direct but destroying approaches of the monopolies already named.

Respectfully,

W. B. NORMAN,
Chairman.

DOCUMENT No. 1.

San Francisco, Feb. 18, 1856.

Sir:

In reply to yours of the 12th, I beg to acquaint you that the State and County Assessor, has assessed the California Steam Navigation Company at $350,000, for the current fiscal year, and at the same amount for the past year.

The Directors have not yet paid this year's taxes. Last year's were duly settled.

Last year's taxes, (exclusive of city,) - - -	$5967 87
This year's taxes, " " - - - -	5337 50

The paid in capital of this Company is about $2,000,000. The present market price of their stock would be $500,000, so that the assessment is considered fair.

Respectfully,

JESSE BRUSH,

Dep. State and Co. Tax Collector.

Hon. W. B. Norman.

DOCUMENT No. 2.

A list of the Steamboats assessed to the Steam Navigation Company—valuation and amount of taxes due:

	Valuation.	Am't tax due.
Steamer Shasta,	$4,000 00	$56 00
" American Eagle,	15,000 00	210 00
" Clara,	5,000 00	70 00
" Marysville,	4,000 00	56 00
" Express,	6,000 00	84 00
" W. G. Hunt,	40,000 00	560 00
One brig,	50 00	70
Steamer Daniel Moore,	5,000 00	70 00
" Gen. Sutter,	4,000 00	56 00
" Gazelle,	5,000 00	70 00
" Hartford,	7,000 00	98 00
" Senator,	50,000 00	700 00
" Wallamett,	12,000 00	168 00
" Pike,	2,000 00	28 00
		$2,226 70

STATE OF CALIFORNIA, }
County of Yolo. }

I hereby certify, that the above is a true list of all the property there has been assessed in Yolo County, to the Steam Navigation Company, and there is now due and unpaid on the same, the amount of $2,226 70, for the year 1856.

Witness,

JAMES A. DOUGLASS,
Ex-Sheriff, and Ex-officio
Coll'r of taxes for 1855.

DOCUMENT No. 3.

California Steam Navigation Company assessed by city Assessor, as follows, for the year 1855 and 1856:

Steamer	Cleopatra,	$8,000
"	Gov. Dana,	8,000
"	Daniel Moore,	2,500
"	Gazelle,	2,500
Hulk	Orb,	800
"	Globe,	800
"	Eliza,	800
"	Tecumseh,	800
"	Crescent,	800
		$25,0000

Same Company assessed for the years 1854–55, - - $153,000

All of which remain unsettled, as appears from the records kept in my office.

JOHN T. KNOX,
Clerk City.

February 6, 1856.

DOCUMENT NO. 4

MARYSVILLE, Feb. 15, 1856.

DEAR SIR:

Your favor of the 6th instant came to hand this day by mail, hence the delay of the answer.

The Citizens' Steam Navigation Company were assessed in this city and county for $65,000:

They paid me for State, - - -	$390
" for County, - - - -	910
	$1,300

The above statement is taken from the assessment roll, and is correct and paid. They have no property laying here in shape of boats, &c. I believe that the Enterprise did lay here some days last summer. The Combination has no property or assessment whatsoever.

Hoping you may get this within a week,

I am, respectfully,

C. N. FELTON,

Hon. W. B. NORMAN.

[Document No. —.]

IN THE SENATE.] [SESSION OF 1856.

MAJORITY REPORT

OF THE

COMMITTEE ON MINES

AND

MINING INTERESTS.

JAMES ALLEN, STATE PRINTER.

REPORT.

To the Honorable the Legislature of the State of California:

The Committee on Mines and Mining Interests to whom was referred Senate Bill No. 11, relating to the tax now levied and collected from that portion of the residents of this State ineligible by law to become citizens, and is understood as repealing the Statute now in force, passed day of 1855, have had the same under advisement, and after the best investigation they were able to give the subject return the same to the body whence it originated and recommend its passage.

Your committee are aware that the objects sought to be accomplished by the enactment of this law elicit the utmost diversity of opinion from all who have examined the subject, not only in regard to the expediency or propriety of the particular law now recommended to the favorable consideration of the Legislature, but extending further and embracing the question of the policy of tolerating, under any circumstances, the presence of this unfortunate people in our midst, as well as the further question of the constitutionality of any law on the subject. Deeply impressed with the importance of the matter under investigation, and fully aware that the public mind is looking anxiously to the course about to be taken by this body, your committee have in deference to these facts availed themselves of every accessible means of information, and arrive at the conclusion that the law now in force was passed and became a law without due investigation. In other words, we would be understood distinctly as condemning it as a hasty, imprudent and mischievous piece of legislation, unauthorized by the existence of any evil at the time in view, or demanded by any fair expression of public opinion. Those who oppose and denounce the propriety of passing this bill urge that these people exhaust our mines and subtract from our wealth by carrying to their remote homes the gold they produce, and that being an inferior race, ignorant and bigoted as well as cruel and selfish, that we, as a people, lose something in the way of dignity and personal self-respect by association with them. They further urge that this people, though extracting from our mines a vast amount of gold, yet are, to a very limited extent, consumers of the agricultural productions of the State, or at any rate that there is the widest possible margin between what they receive, and what they disburse. These reasons are entitled to great consideration, as it is believed that they include the main grounds of opposition to this bill.

California possesses illimitable wealth. Between the snowy mountains which make her eastern boundary and the wide rolling Pacific are cradled riches surpassing in extent the magnificence of all other lands. Her soil is rich in every generous production which the earth ever yielded to her children. Her mountains and hills reek with a metal which has through all time controlled the world. These mighty resources are undeveloped for the want of population, and our country, fully aware of these facts, has ever made it her policy, to which so much of our national greatness is to be attributed, to invite hither all who had the strength and will to labor. This invitation may not have been an express one, but it is known to have been our policy, and if it was implied and not expressed it is the more cordial because of that fact; and as they are here additional argument why we should deal justly with them can be derived from this view of the matter.

The mines of California are neither exhausted of their wealth or crowded by excess of population; on the contrary, they are scarcely developed, and there is room for all who are willing to work. There is room, yes, a demand in California for a million of men. It is in the knowledge of all who are conversant with this branch of our subject, that this people labor only in placers abandoned and condemned by others whose ideas of the value of money is more liberal than theirs; and that on account of their frugal habits, and the cheap character of the food they consume, they are able to procure adequate remuneration for their patient toil in places where another would find it difficult if not impossible to procure a subsistence. It may not be our policy to invite them hither; however this may be, it is certainly not good policy or sound morals to attempt, by the enactment of oppressive sumptuary laws, to drive them hence, especially, when they had no notice before coming that such would be the line of policy pursued by us towards them. The law, as it now stands, is well calculated to defeat the very object for which it was passed, by reducing them to a condition of such abject penury that they will never be able to leave or do anything else. It is strange that this reflection did not cross the minds of the astute gentlemen concerned in its passage. Most of the gold produced by them is left in the State; yet even if it were not, it is not because of that fact lost to us or to mankind, but yet remains as so much of the aggregate wealth of the world, in the reach of any one who has an equivalent to offer therefor. These people do not crowd our poorhouses—"they are not found begging on street corners"—they are scarcely ever seen in our Courts—in our prisons, they are scarcely ever met. Yet if all this were true, and they were really a bad people, would it be good to take their money and effects from them, reduce them to abject poverty, and thus incidentally force them into crime? It may be proper to adopt measures to rid the country of them; if so, send them out, but do not attempt to do so by legalizing a crusade of questionable decency against the property they have made here, or brought with them to this country.

Again, they are a weak people, and are at our mercy, and it is certainly not the policy of a proud, powerful, and magnanimous nation to oppress any one, least of all, a class of defenseless strangers.

Again. For the last one hundred and fifty years, the commerce of the nation of which this people are representatives, has been considered, and is now deemed to be one of the richest prizes for which a nation struggles; up to this time, no one particularly can be said to have borne off the palm The contest is yet unsettled, and the lists are yet open—while from our geographical position we possess great advantages, facing them, as we do, across the sea.

The United States, fully impressed with this important matter, has signalled in the most emphatic manner, a desire not only to continue and perpetuate, but to create further friendship with these nations by sending thither, on a very recent occasion, one of its best appointed fleets.

In this connection it may not be inappropriate to observe—That the history of our country, inculcating as it does, the highest political maxims which the mind of man is capable of comprehending, also teaches as it were, a political morality, and recognizes if it does not directly indoctrinate a belief in the sanctity of our Christian faith. In ages past and gone, our race separated from this people. Their lot lay to the East, and darkness has covered them with a mantle. Ours lay to the West, and be it said, in no feeling of vanity or gratulation, that around our path, and over our destiny has been shed a bright refulgent light, by which we ever have, read and taught, as our cardinal maxims, Virtue and Morality, Faith, Hope and Charity.

In this remote land—the westernmost track in the tread of empire, we meet again. Let us not signalize this meeting by an Act of unprovoked oppression. They learn many things by association with us. They perhaps return to their own land, to speak of the lessons they have received in this. Would it not be wrong—aye, even sinful—to teach them that we, who boast of ourselves as being in the van of civilization, and living evidences of the might of faith, of the fruition of hope, and of that charity which does to others as it would be done by, yet were found deficient in all these generous attributes, and were only bigoted, proscriptive, and intolerant?

These questions belong to the casuist, but your committee cannot forbear all mention of them.

In regard to the assertion that society is corrupted by the presence of this class, your committee are unable to sanction a proposition so little complimentary to the intelligence and dignity of the American character. Intelligent men do not copy their inferiors, nor is the tendency of human mind downwards. Any one who would be corrupted by any association of this sort, is already by nature, beyond the reach of redemption, or the power of recall.

Negatively we think that they have done us no harm, they have certainly done us a great deal of positive good, in the way of contributions towards the support of our government.

The chairman of your committee addressed a note to our efficient and polite Controller of State, requesting a statement of the amount received into the State Treasury from this source—we here beg leave to introduce his kind reply:

OFFICE OF CONTROLLER OF STATE,
January 18, 1856.

HON. CHAS. WESTMORELAND,

Chairman of the Committee on Mines and Mining Interests:

SIR:

Your favor requesting "the amount of revenue received into the State Treasury from the sale of Foreign Miners' Licenses, from the enactment of the law relating thereto, up to the present time," was duly received. Below I have the honor to submit a statement, which I trust will be satisfactory:

Receipts, 2nd fiscal year,		$29,991 20
" 3d do		1,002 53
" 4th do		53,121 01
" 5th do		100,557 92
" 6th do		123,323 25
" from July 1st, 1855, to Jan. 12, 1856,		121,439 00
Total receipts from Foreign Miners' Licenses,		$429,434 91

Respectfully,
Your ob't servant,

GEORGE W. WHITMAN,
Controller of State.

An amount at least equal to this has been paid into the various County Treasuries, and the whole of this revenue is jeopardized by the law now in force.

El Dorado is believed to be one of the most important mining counties in the State.

The Treasury of that County received from this source, in

1853	$10,042 62
1854,	26,649 97
1855,	57,270 05
29th Sept., 1855, to Dec. 1855,	8,404 00
Making,	$102,426 64

While the same amount has gone into the State Treasury from this county.

This fund so paid into our County and State Treasuries has had a most marked and important influence on our financial history and standing. By the action of the law now in force, in the county referred to, there is a monthly diminution of $2,349 78, or annually of $28,197 36, from what has been received in former periods.

Are we in a condition to disregard this important branch of our municipal revenue? It seems to your committee that we are not in any such position.

These people have always been willing to pay four dollars per month, but refuse to pay six, when by the action of the law itself it is to be regularly increased, thereby driving them to bankruptcy geometrically. They will not pay it and are generally too poor to leave the country. This report, already extended as it has unavoidably been to a great length, only embraces a very few of the arguments, and those hastily expressed, on this important subject.

CHAS. WESTMORELAND,
Chairman.

JOHN D. COSBY.

Document No. —.

IN THE SENATE.] [SESSION OF 1856.

MINORITY REPORT

OF THE

COMMITTEE ON MINES

AND

MINING INTERESTS.

SUBMITTED MARCH 10, 1856.

JAMES ALLEN, STATE PRINTER

REPORT.

Mr. President:

The undersigned, a minority of the Committee on Mines and Mining Interests, to whom was referred Senate bill No. 11, which proposes to repeal section 1 of an Act passed April 30, 1855, entitled "an Act to amend an Act to provide for the Protection of Foreigners, and to define their Liabilities and Privileges," passed March 30, 1853, respectfully beg leave to report, that they have given the whole subject matter a most careful consideration; and finding it impossible to approve the sentiments and recommendations of the report adopted by a majority of this Committee; but believing them to be unwise and impolitic, and contrary to the wishes of a large majority of the electors of this State, we have felt it to be a duty which we owe to our immediate constituency, to make this counter report, and in their name protest against any disturbance of the several Acts now in force in regard to the liabilities and privileges of foreigners in this State. To this end, we most earnestly recommend an indefinite postponement of the bills under consideration.

The purpose of Senate bill No. 11, the passage of which is so earnestly recommended, and ably argued in the majority report, is simply this: The reduction of the tax at present imposed, for the privilege of working the mines of California, upon that portion of our foreign population who are by law ineligible to become citizens of the United States, from the sum of six dollars to four dollars per month. And it is to defeat this purpose, that we recommend the indefinite postponement of the bill.

You will here, however, permit us to remark, that, in making this recommendation, we have not done so hastily and without due investigation. We are profoundly impressed with the momentous importance of a question that involves the disposition of the forty or fifty thousand Chinese now sojourning on our shores. We regard it as of paramount interest to all other questions that are now before the Legislature. We look upon it as a matter of too much importance to be considered alone with reference to its *temporary* results. Taking hold, as it does, not only of the present, but reaching out into the far distant future, its possible and probable results *there* should also be weighed and profoundly considered by the legislator. With these assurances, we propose to submit, in a very brief and fragmentary manner a few remarks in support of the

position which we occupy in reference to Senate bill No. 11. And first we would inquire:

Is the object which the bill proposes to accomplish, viz., a reduction of the Chinese tax full one-third from the sum now fixed by law, recommended by a sound State policy?

We think not. True, if the Chinese were a desirable population—if their labor was necessary to the development of the immense riches which California, to use the beautiful and vivid language of the majority report, has "cradled between the snowy mountains which mark her eastern boundary, and the wide rolling Pacific," then we, too, would urge the removal of all existing restrictions, and demand that they be permitted to go into our mines, and enjoy, "without money and without price, all immunities and privileges possessed by our own citizens. But are they such a population? and does such necessity for their labor exist? Who will answer these questions in the affirmative? Who among the people will, or have answered thus? No one, save an occasional trader, or packer, or merchant, or, perhaps, some stage or steamboat man, and their immediate friends, who are directly benefitted by the presence of the Chinamen in our midst. But surely no such response will be heard coming from that class of men who constitute the great majority of the population of this State—we mean the laborers, the workingmen—that class to whose strong arms California is indebted for her wondrous rise and unexampled progress, in the short period of six years, from almost utter obscurity to a position alongside of the wealthiest and most important States of our proud Republic.

No, Mr. President; the working men of California do not demand the repeal of the existing law in regard to the Chinese Tax. They are satisfied with its operation. That law was placed upon our statute books in obedience to the almost unanimous voice of the electors of this State, and especially that portion of them more immediately interested—the miners. They believe that such a law would *encourage the Chinese to gradually leave the State;* experience has proved that such is the effect of the law. Is it then reasonable to suppose that they are dissatisfied with it now, because it is operating precisely as they anticipated and hoped? If so, then we ask those whose sympathies are with the Chinamen, where are the evidences of this dissatisfaction? Has any voice ever reached this hall, coming from the miner's cabin, in the mountains, or the humble cottage of the laboring man, in our cities and villages, that asks for its repeal? No. Where then do we find indications of the people's dissatisfaction? Can any one, with truthfulness, say that such dissatisfaction does really exist? If so, then we frankly, and with a proper degree of humiliation, confess that we have utterly failed to discover it, and are totally incompetent to the task of fixing its 'local habitation."

True, a few petitions from one or more mountain counties, and one from sundry merchants of San Francisco, have been presented to the present Legislature, praying for a modification of the existing law so far as it has reference to the Chinese. But when it is remembered with what universal satisfaction, in every portion of the country, the passage of the statute now in force was received less than one year since, it will, we doubt not, be thought by you, as it is by ourselves, that these petitions have already received the only consideration to which they are entitled.

But, in the absence of any demand on the part of the people for a repeal of the law of 1855, we are gravely told by the majority report, which urges the repeal of that law, that it was passed "without due investigation," that it was a "hasty, imprudent and mischievous piece of legislation, unauthorized by the existence of any evil at the time in view, or demanded by any fair expression of public opinion. In reply, we have only to state what is well known to every newspaper reader in the

State, that the last Legislature was literally flooded with petitions and proceedings of miner's meetings, from almost every mining county in the State, praying the Legislature to enact a law which would more effectually rid the State of the disgusting presence of the Chinese, than did the law of 1853. And that it was in obedience to this almost unanimous demand of the miners that the Legislature of 1855, after a longer and more thorough investigation than they gave to any other question during the session, placed upon the statute book the law now in force. In the face of these facts, which should be so familiar to every legislator, it is astonishing that the authors of the majority report, who "availed themselves of every accessible means of information," should make the extraordidary declaration that "the law now in force was passed and became a law without due investigation."

But it is urged, and this seems to be considered by the friends of reduction as the unanswerable argument in its favor, that, unless our laws are so modified as to encourage these fifty thousand Chinamen to remain among us, our State and County Treasuries will speedily approach bankruptcy. Were it not for the fact that this argument is used by gentlemen with all the seriousness and gravity becoming legislators, we would be disposed to look upon it as one of the many facetious emanations of the fertile brain of that incomparable wit "Squibob," which keep the good people of California in a state of uninterrupted good humor: but, coming as it does from grave legislators, we are forced to treat it with becoming gravity. In doing so, however, we confess to a feeling of more than ordinary humiliation. Our pride as Americans, and more especially as Californians, is humbled, when we hear intelligent citizens, through the columns of the newspapers and otherwise, confess the belief, if the Chinese should some fine day determine to return to their oriental homes, and put that determination into execution, that the great State of California would be financially crippled! reduced almost to the verge of bankruptcy! Can it be possible that any facts exist upon which such an extraordinary opinion can be justly based.

Is it true that the hundred thousand Californians are so poor that they cannot support a government without the aid of the fifty thousand miserable and bestial Chinese now in our midst? We cannot believe it. The very idea is an insult to every citizen within our borders. It is a reflection upon them as men, as Californians, as patriots. It is a libel upon them as Americans. It argues that they are unfit to enjoy, and incapable of supporting a government of their own making. From such a slander the intelligent people of this State need no vindication.

Our Christianity is also appealed to, and we are told by many good men who have at heart the conversion and enlightenment of the Heathen, that the law of 1855 presents a most serious obstacle in the path of the missionary. If this be so, as Christian men we most truly deplore it. In common with good men of every Christian land, who would see the dark places of the heathen world illumined by the Gospel of truth, we desire to encourage the Christian missionary in the prosecution of his arduous, exalted and most holy work. To accomplish this we are willing to render every assistance which our duty as men and legislators demands. But if the Chinese make it a condition precedent to their conversion to Christianity, that we take them to our bosoms and permit them to work our gold mines, then we say, with all earnestness, let them continue in the darkness of heathenism.

Again, it is urged that the commerce of eastern Asia is a prize for which, during many centuries, the commercial nations of the earth have struggled and that the nation which carried off that prize has invariably grown wealthy and powerful. For this reason, it is argued, our true policy dictates that, in order to secure this rich prize, we should repeal all laws which restrict the privileges of the Chinese in this State, and thus, as a nation, gain their especial love. We fully

appreciate the importance of monopolizing the rich trade of Eastern Asia ; and to accomplish that would have our commercial intercourse with the people of that part of the globe as liberal and free as possible. We would remove every unnecessary restriction upon the trade between the two countries. We desire their *trade*—we desire to monopolize their *commerce*—but we do not want *them*. We are utterly opposed to any interchange of population.

It cannot fail to occur to the reflecting mind that there are several evils connected with this question, of a character so momentous as to far outweigh all considerations of dollars and cents. The presence of this people in our midst threatens the entailment upon us of an anomalous kind of slavery unknown to our system of government, and infinitely more obnoxious than the Peon system of Mexico. It likewise threatens to *degrade labor, and depreciate its value.* Indeed it has already had that effect. It is to preserve California as the favored and peculiar *home of the laboring man*, that we urge the exodus of the great body of the Chinese population of this State.

But this report has already swelled to a length much greater than we intended: therefore, to sum up, in a few words, some of the reasons for advocating the continuance of such laws upon our statute books as will tend to encourage the Chinese to leave the State, we believe—

That their presence here is a great moral and social evil—a disgusting scab upon the fair face of society— a putrefying sore upon the body politic—in short, a *nuisance*, that, unless speedily abated, is likely to work tremendous and lasting injury to the State;

That they threaten the entailment upon us of a strange system of slavery obnoxious to our institutions;

That they *degrade labor*, and depreciate the value thereof, to the great detriment of the working men of this State;

That they are, by law, incapable of becoming citizens of the State.

That the existing Chinese laws were passed in obedience to the almost unanimous demand of the laboring men of the country;

That these laws operated and are operating precisely as their authors predicted:

And, in short, we are opposed to a repeal or modification of the existing laws relating to the Chinese, for the reason that the *People do not demand it.*

S. H. DOSH.
JOHN D. SCELLEN,
J. W. MANDEVILLE.